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THURSDAY, SEPTEMBER 1, 1960

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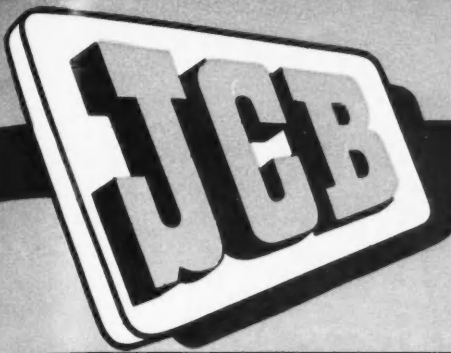
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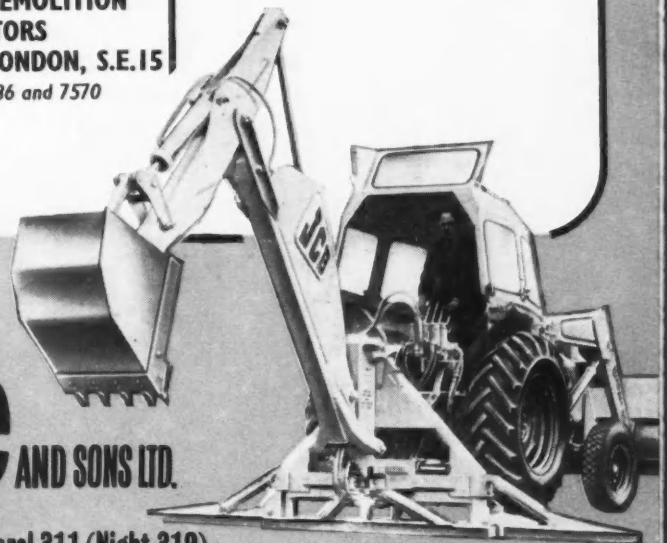
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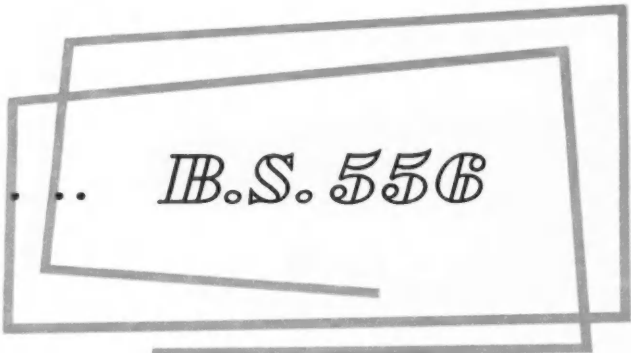


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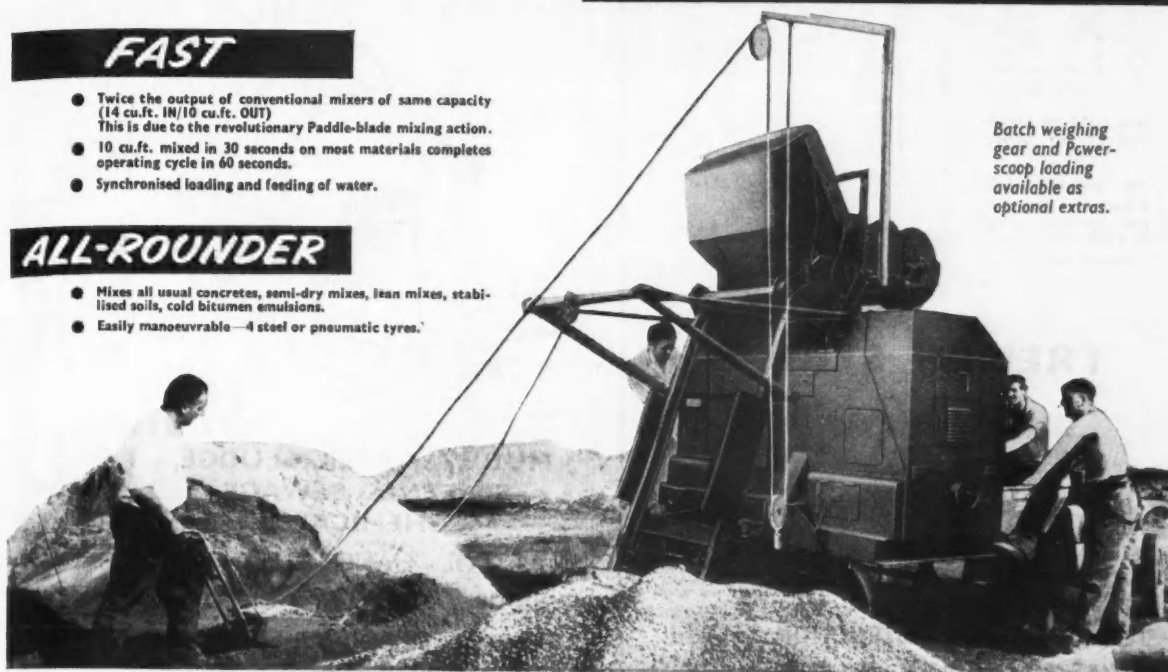
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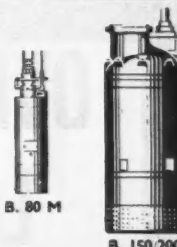
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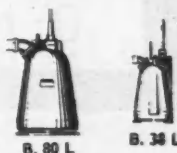
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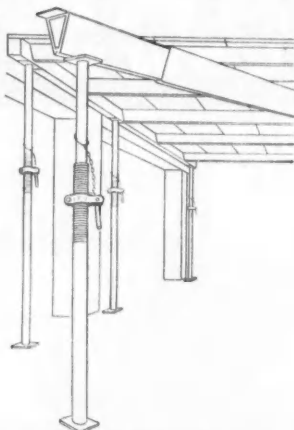
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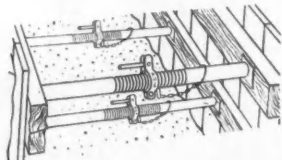
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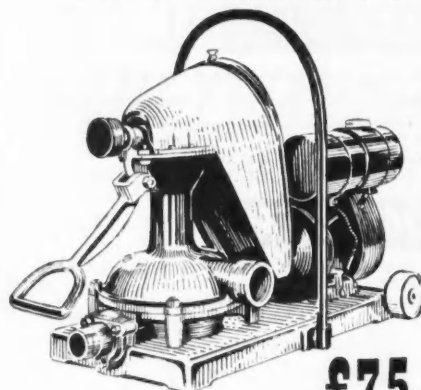
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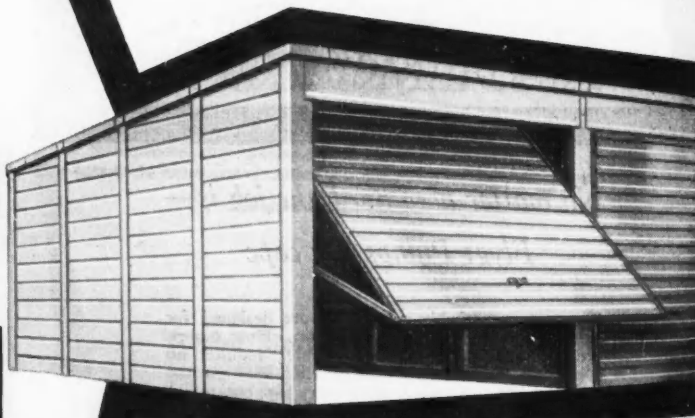
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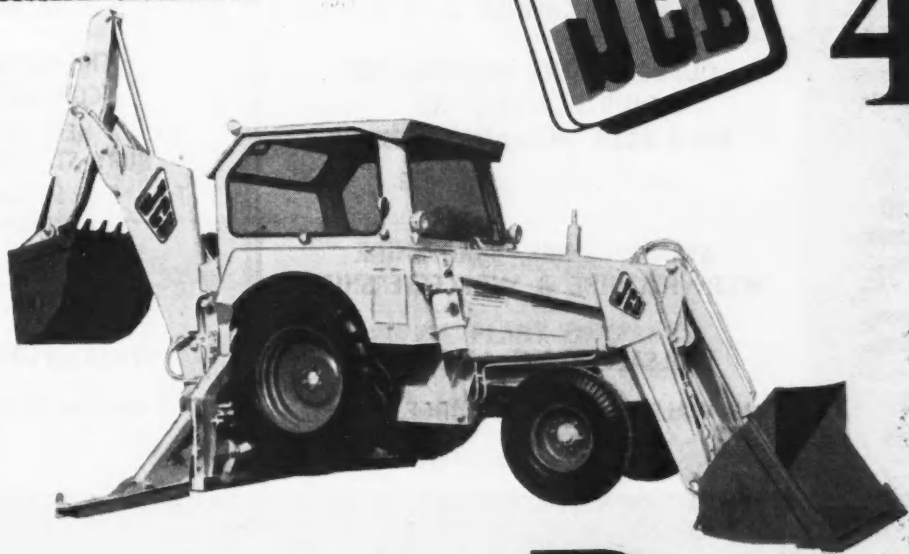
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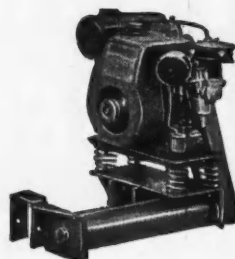
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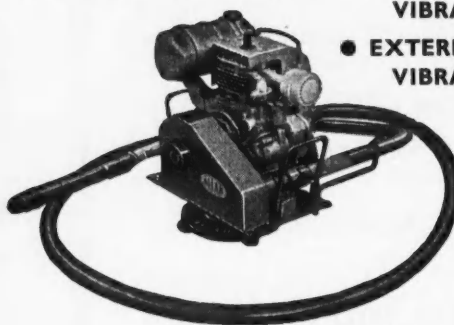
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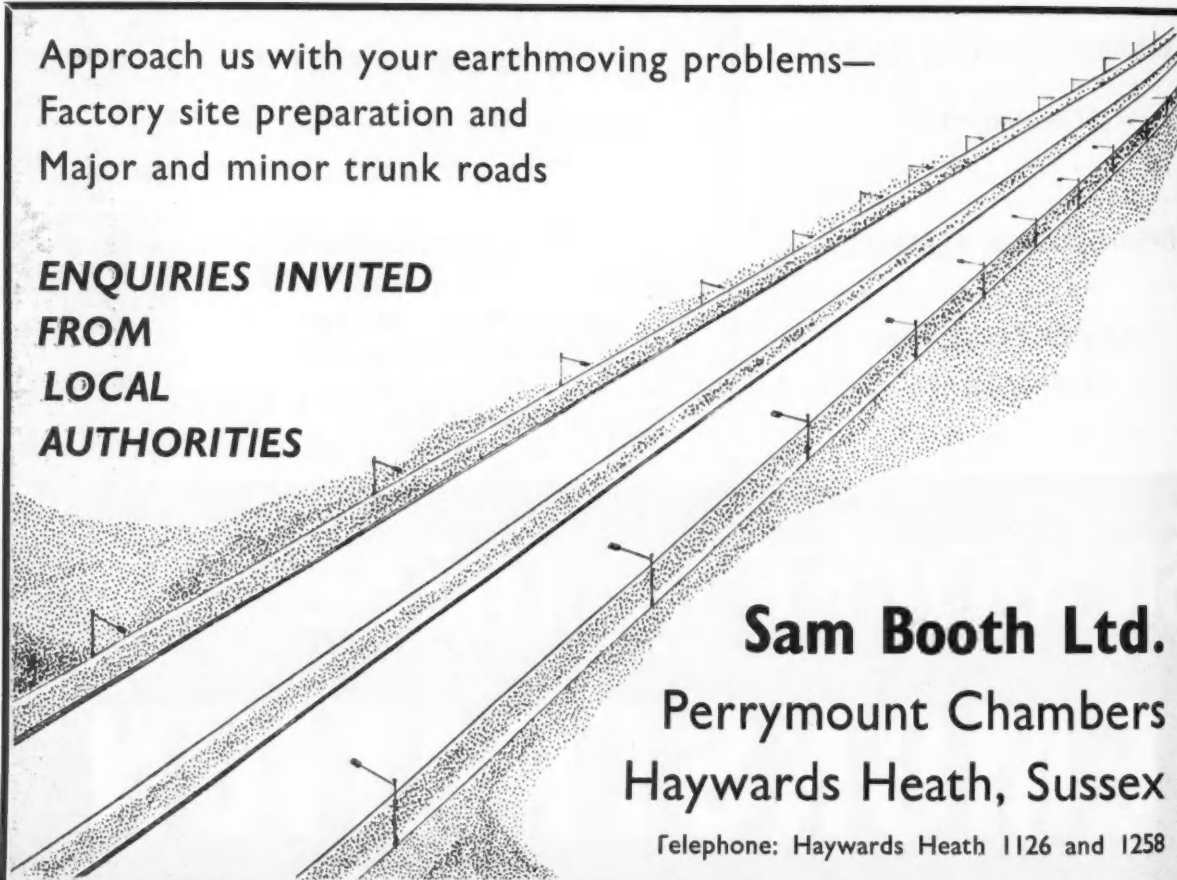
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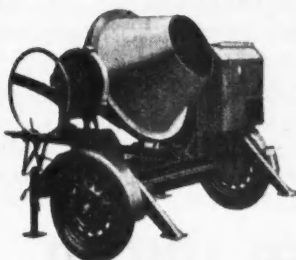
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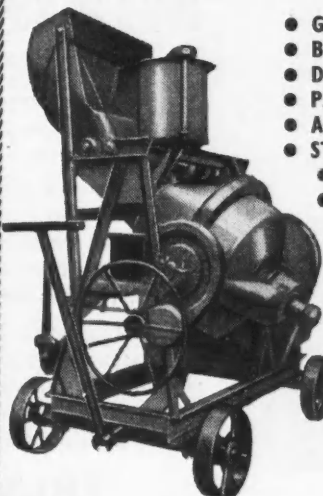
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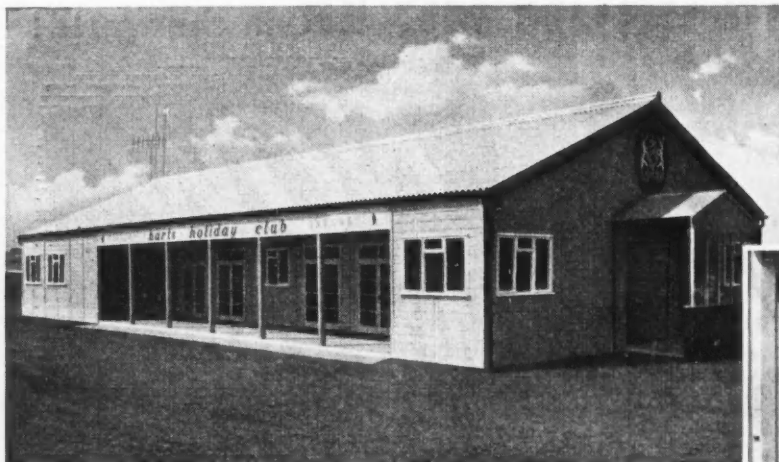
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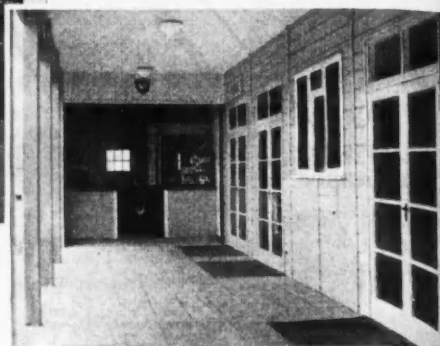
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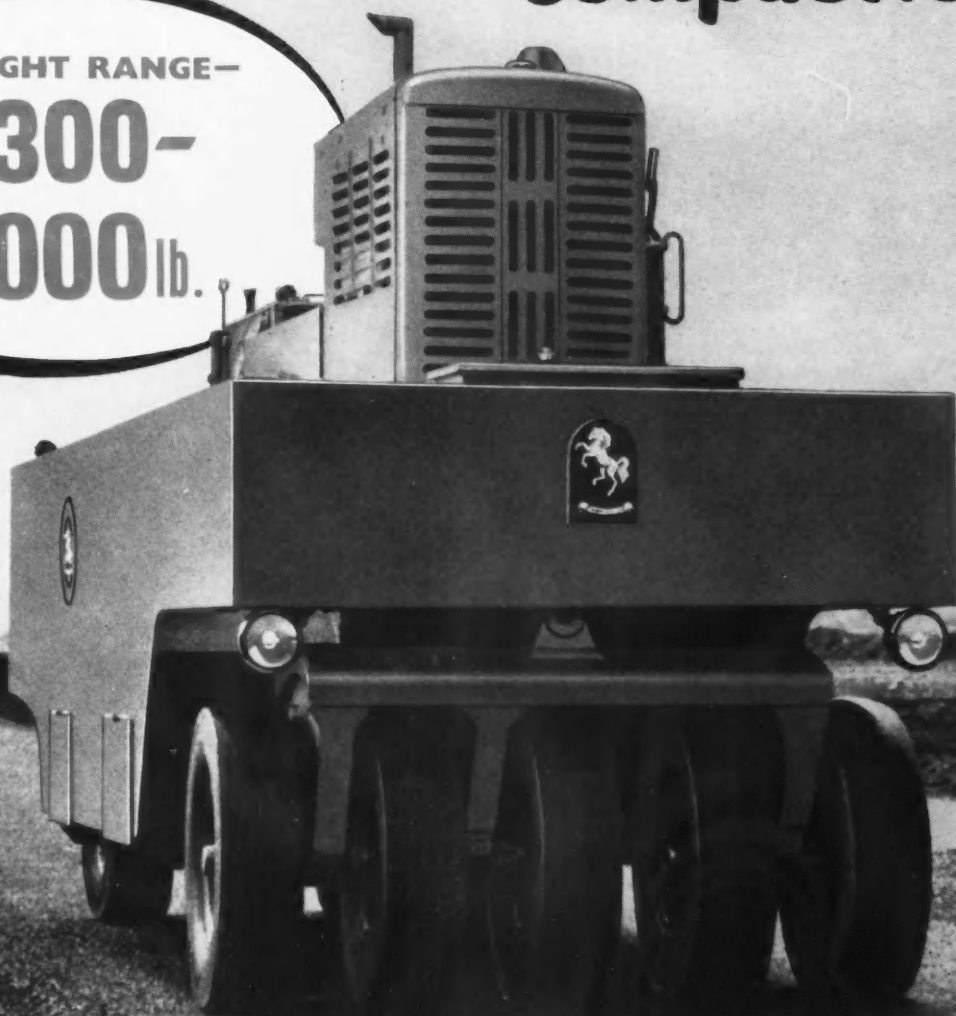
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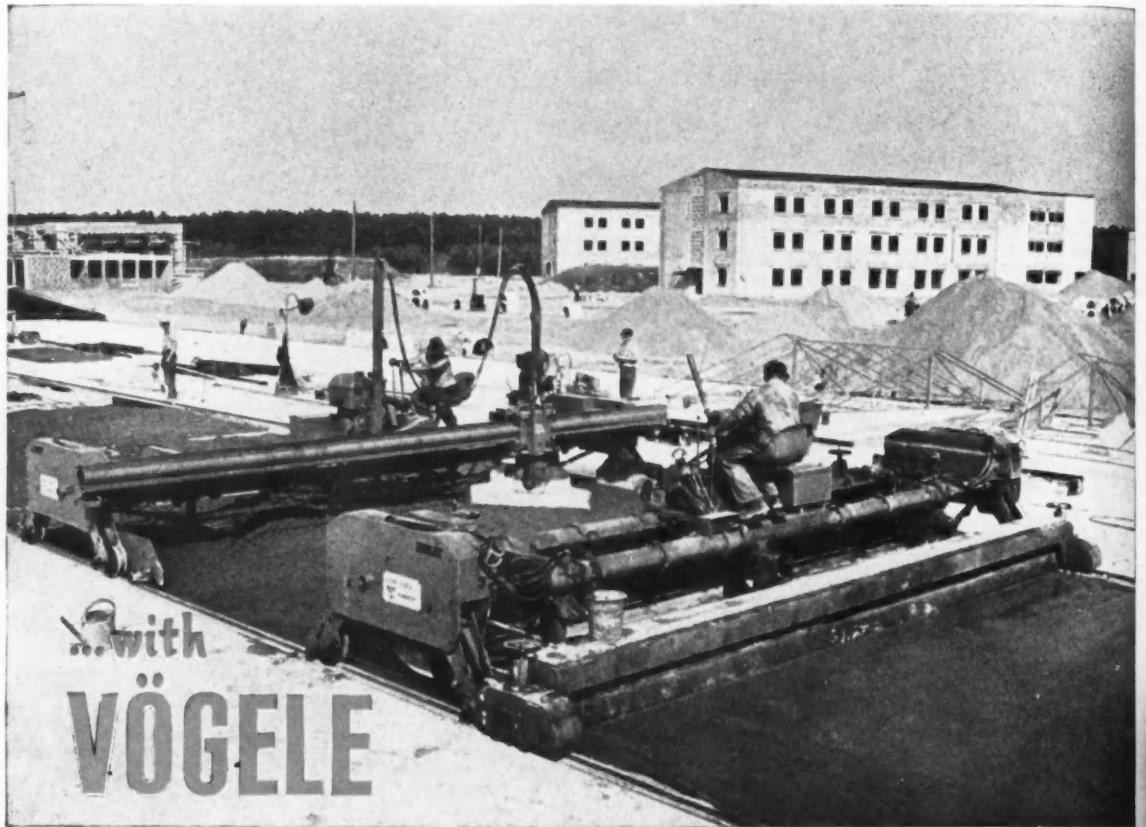


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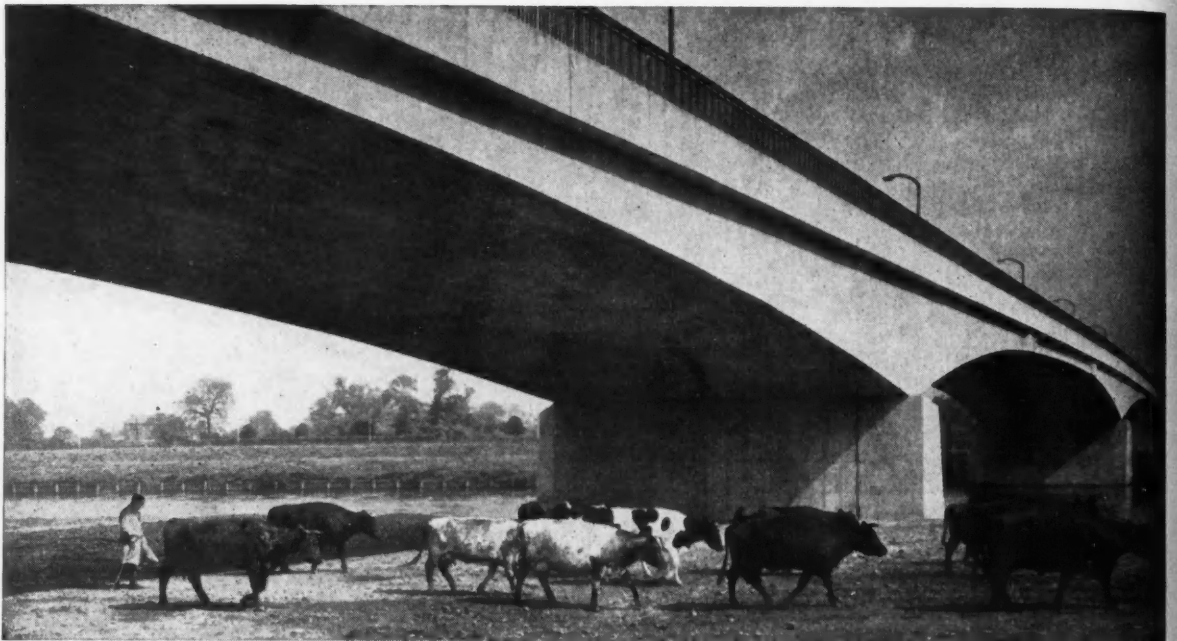
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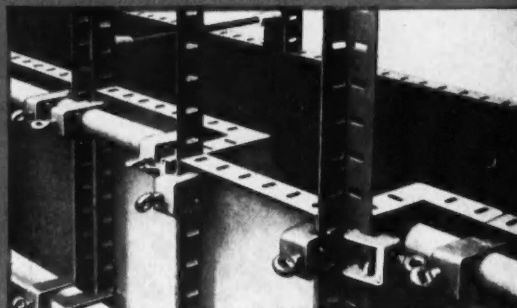
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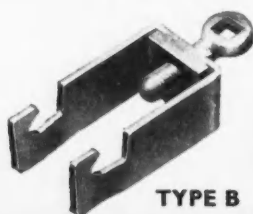


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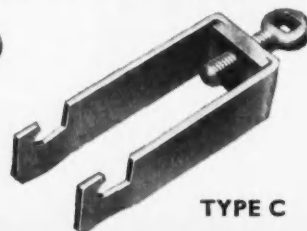
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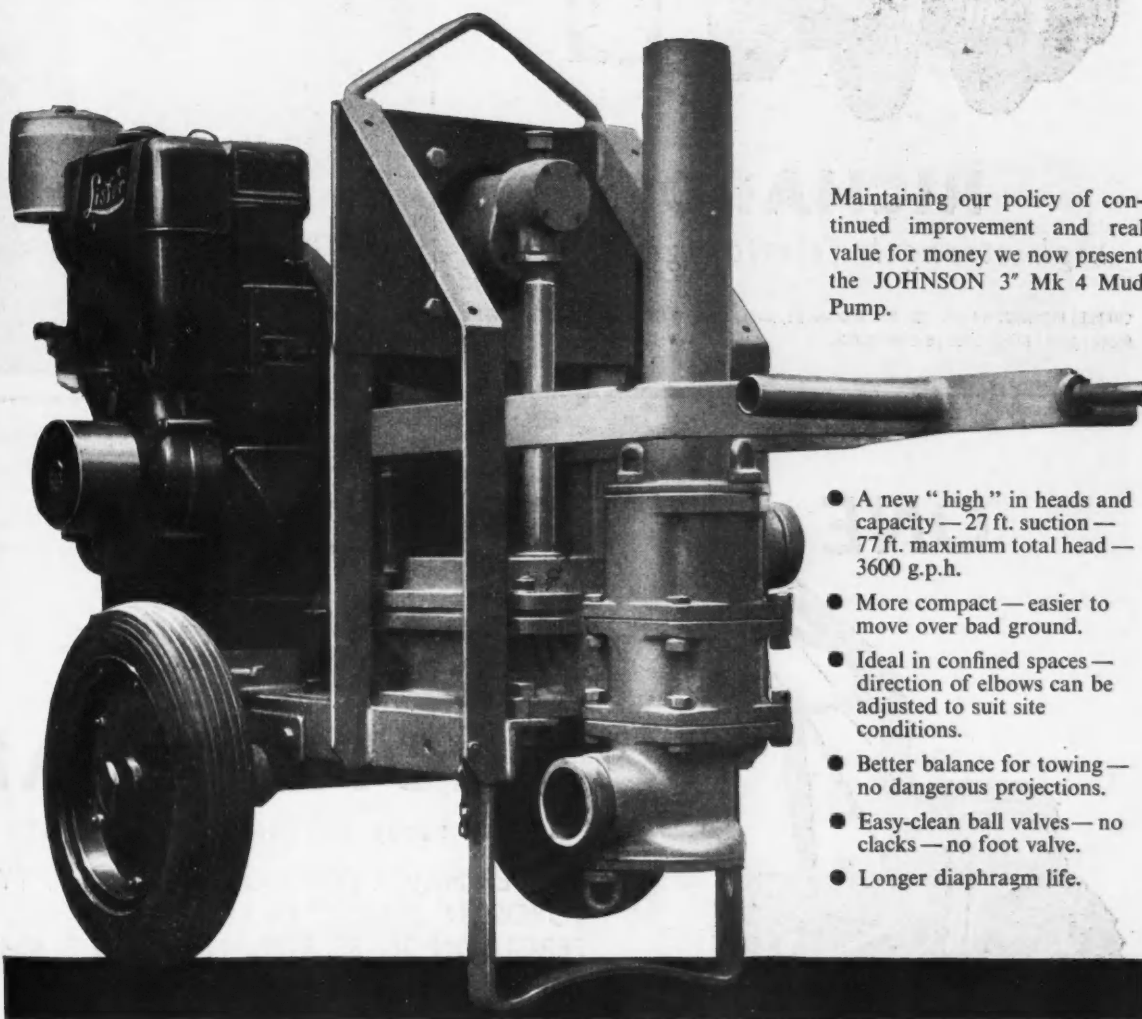
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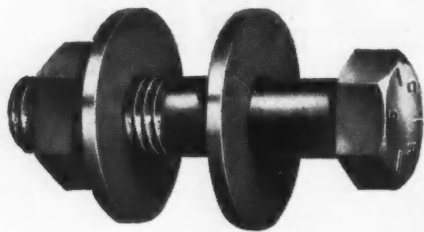
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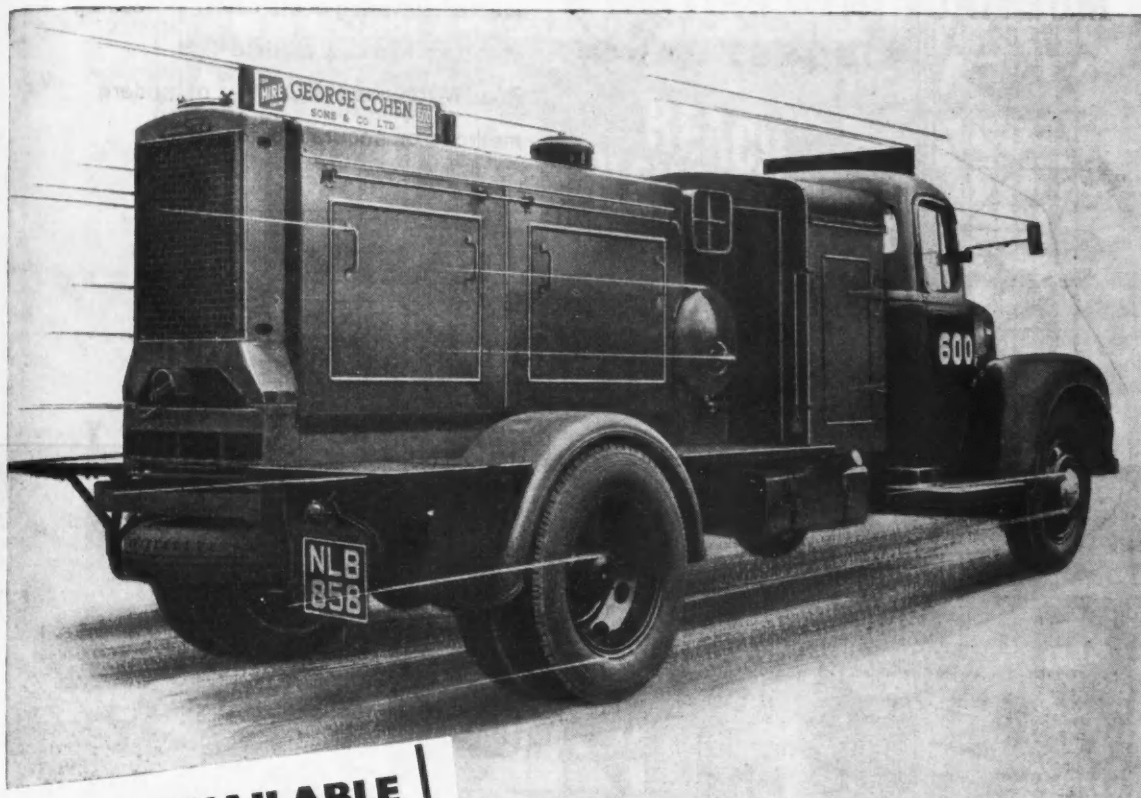
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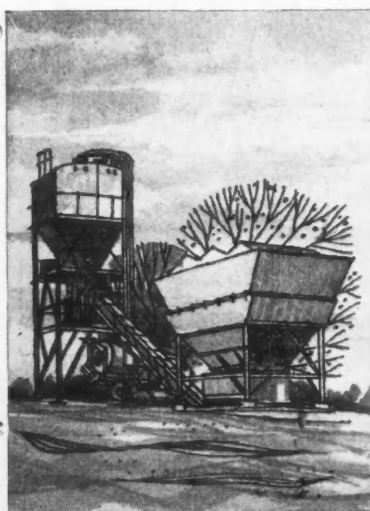
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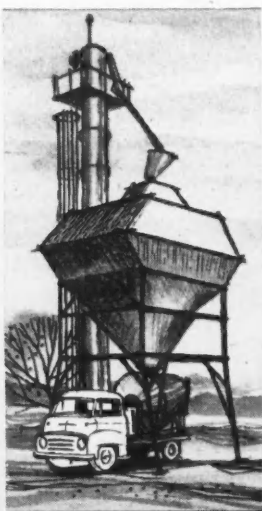
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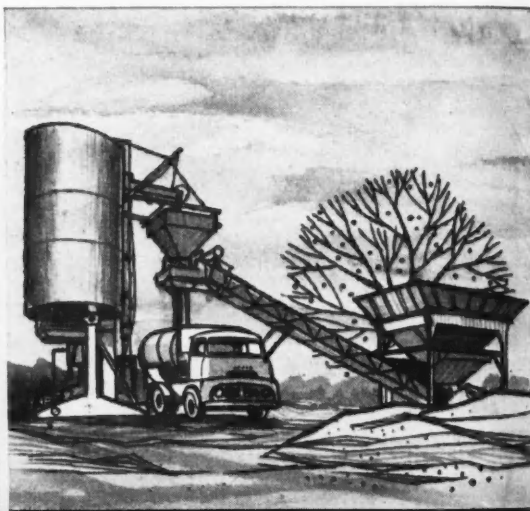
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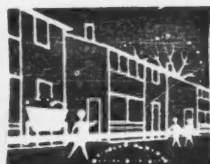
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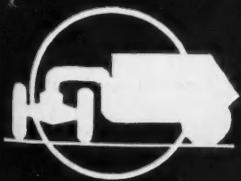
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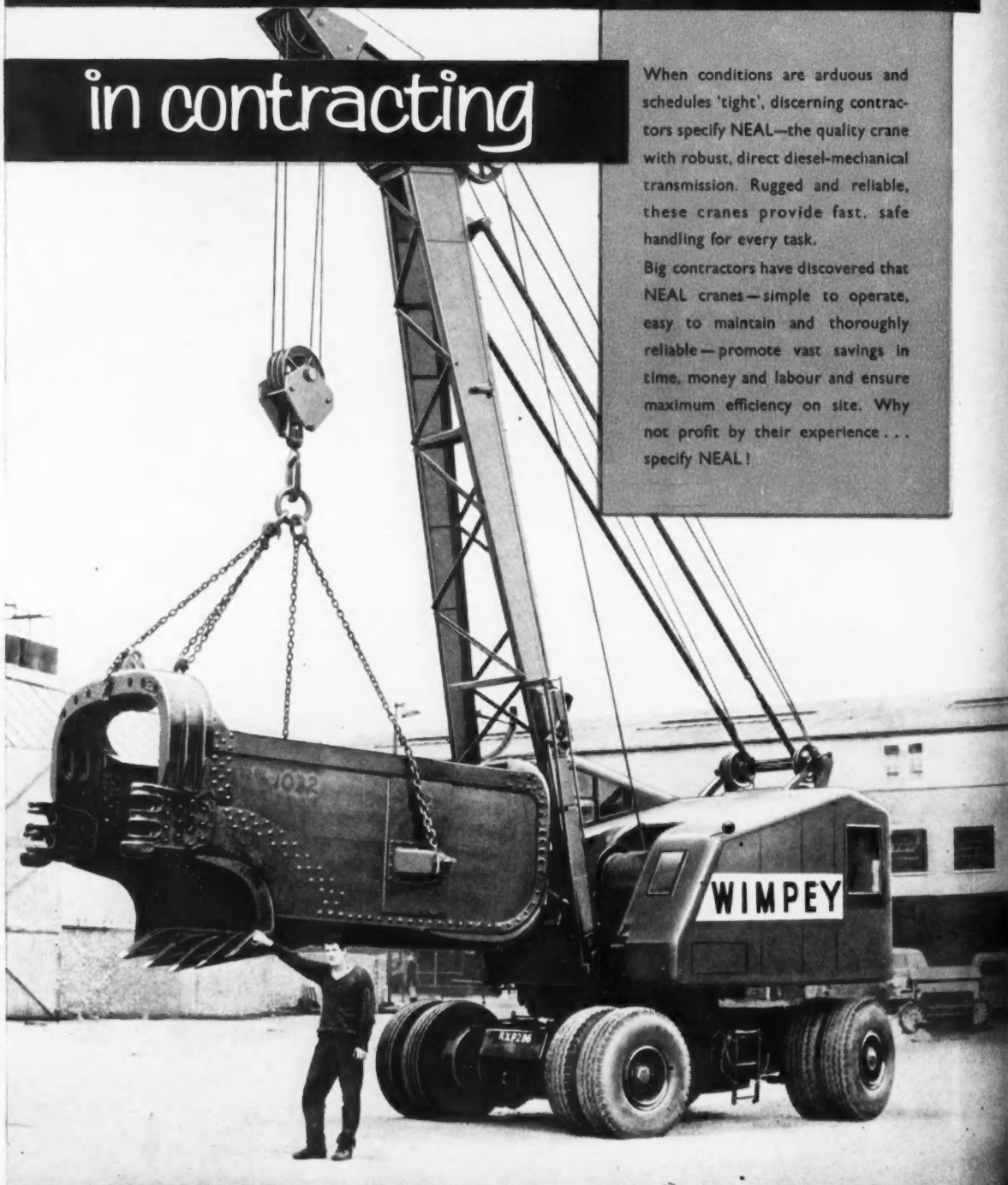


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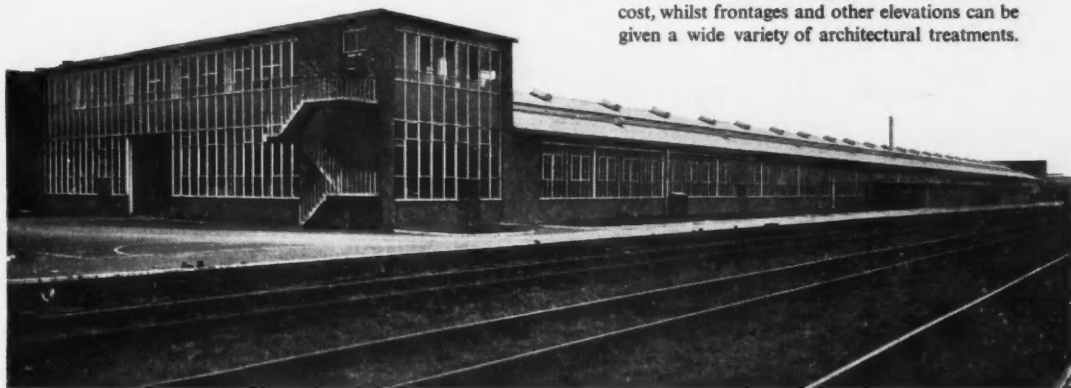
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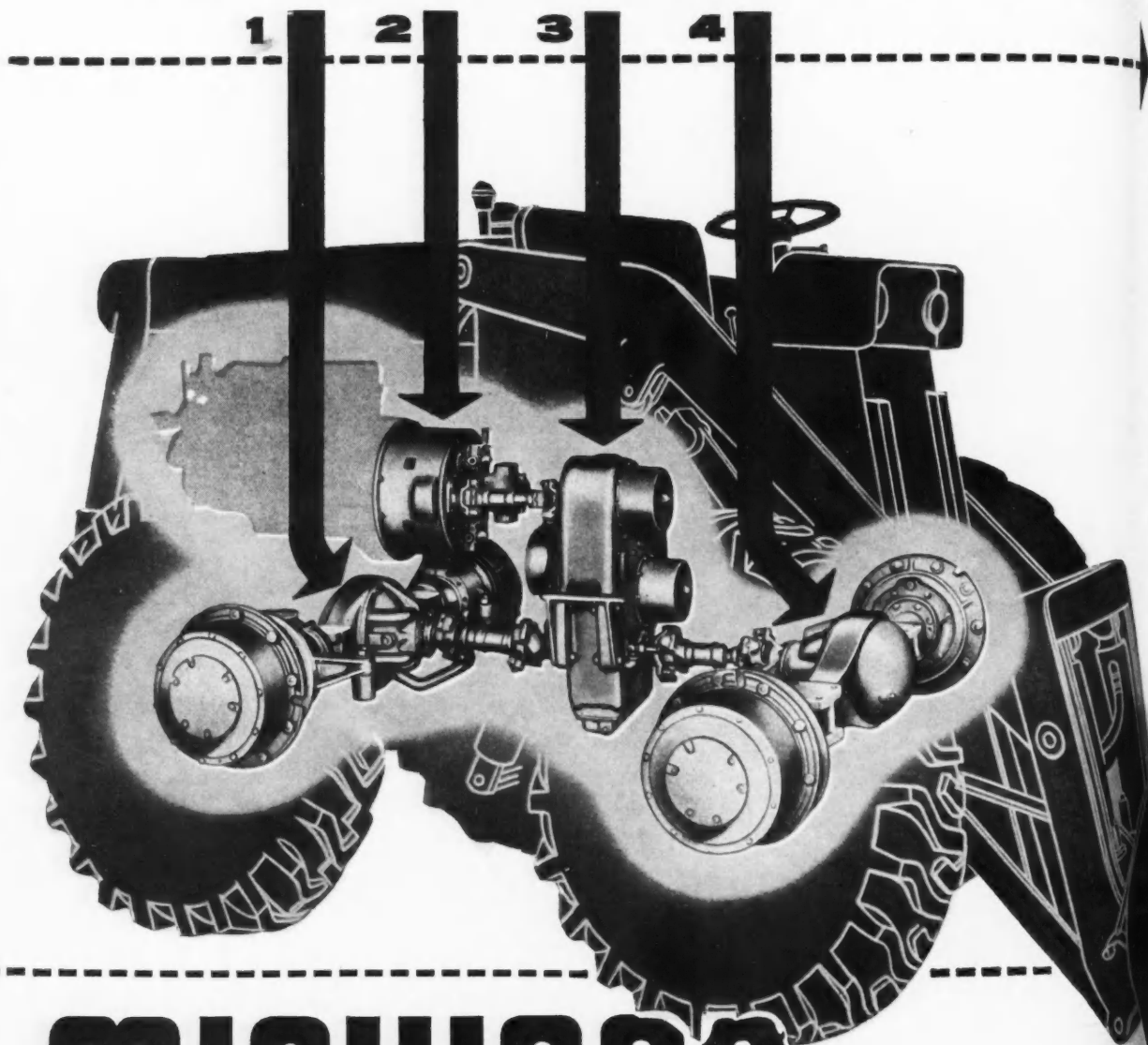
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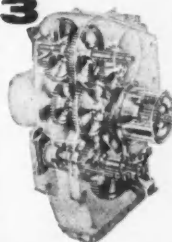
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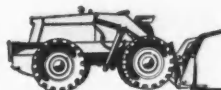
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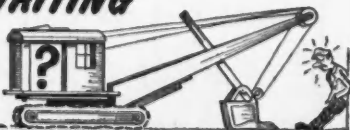
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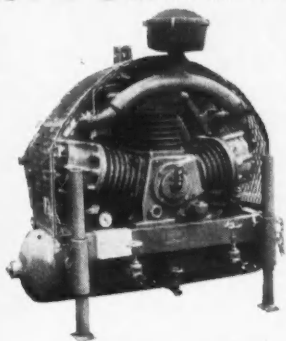
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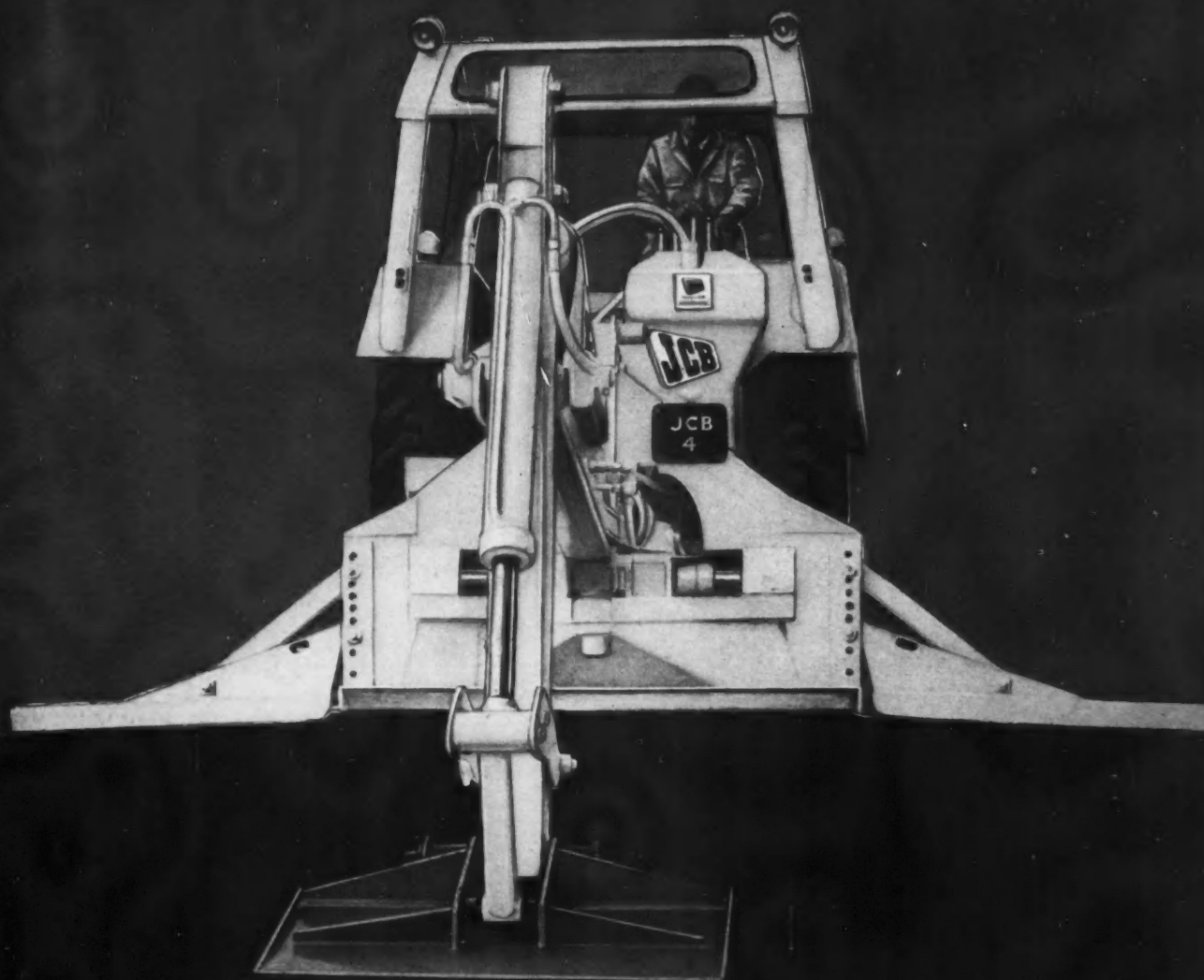
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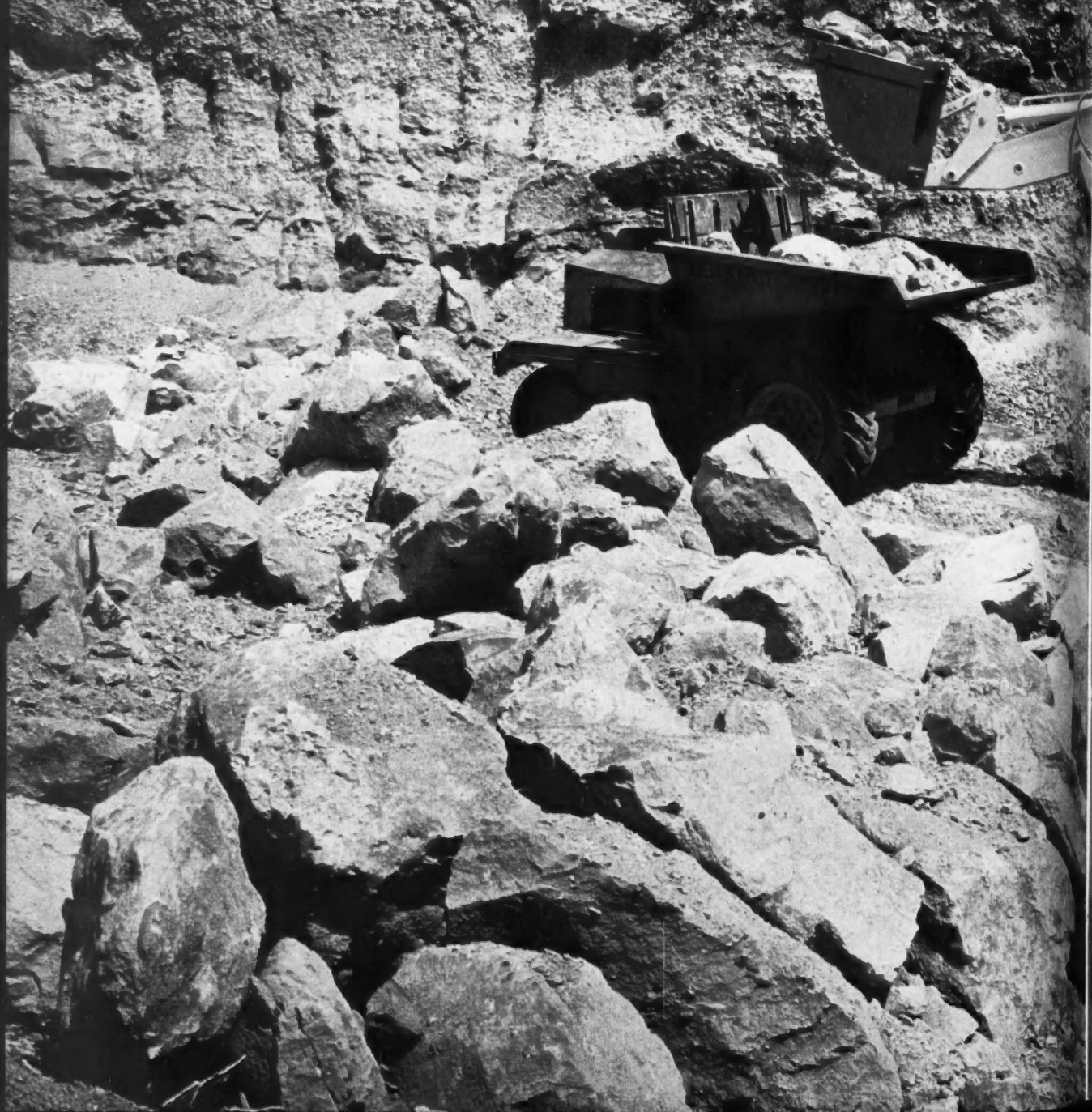
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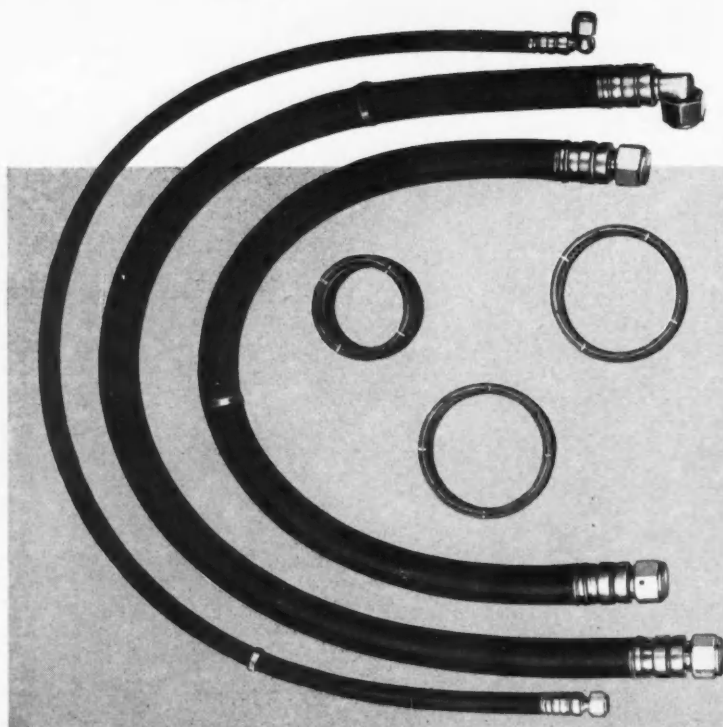


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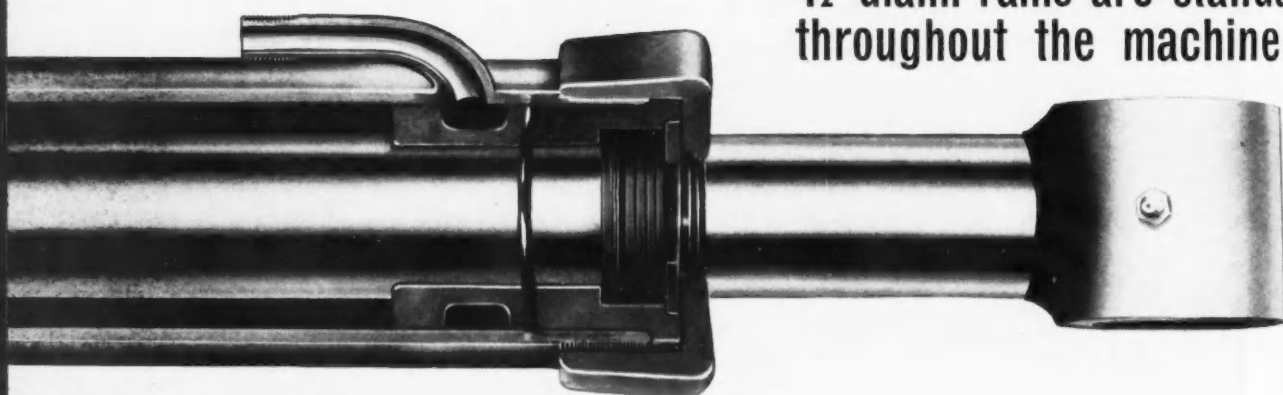


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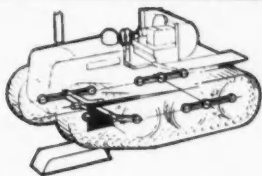
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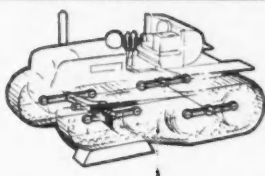
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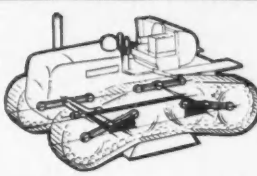
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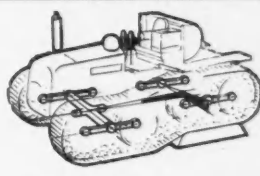
This is how the front wheels pivot when one track meets an obstruction. The driver rises only 1/4th the height of the obstruction.



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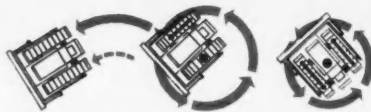
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forward and reverse.

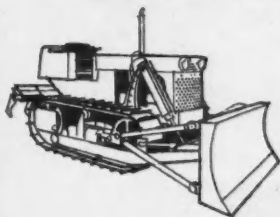
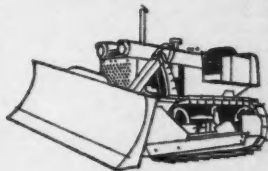
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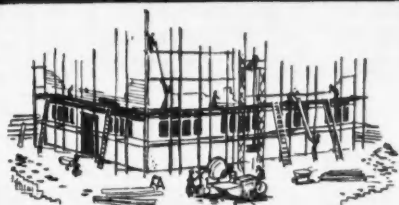
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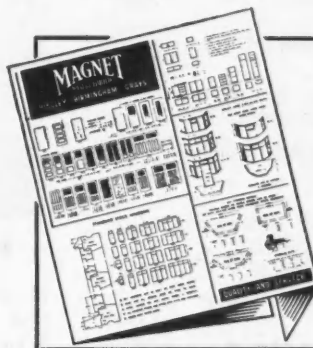
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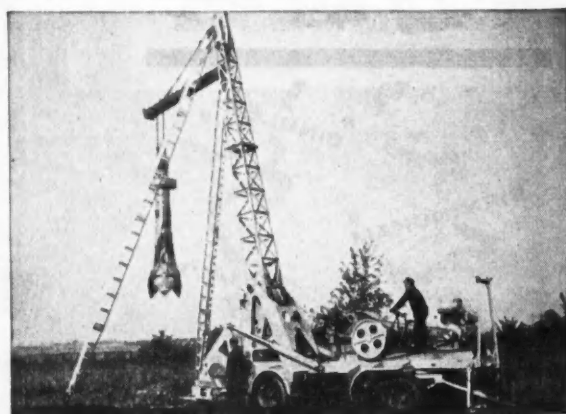
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E-32-2	14 $\frac{1}{2}$ "	17 $\frac{1}{2}$ "	3	-	1720lbs.	187lbs.	16 $\frac{1}{2}$ "	15 $\frac{1}{2}$ "
	16 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "		-	1764lbs.		18 $\frac{1}{2}$ "	17 $\frac{1}{2}$ "
	20 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "		18 $\frac{1}{2}$ "	1841lbs.		22 $\frac{1}{2}$ "	21 $\frac{1}{2}$ "
	24 $\frac{1}{2}$ "	29 $\frac{1}{2}$ "		21 $\frac{1}{2}$ "	1962lbs.		26"	24 $\frac{1}{2}$ "
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	38 $\frac{1}{2}$ "	43 $\frac{1}{2}$ "		32 $\frac{1}{2}$ "	3307lbs.		39 $\frac{1}{2}$ "	38 $\frac{1}{2}$ "
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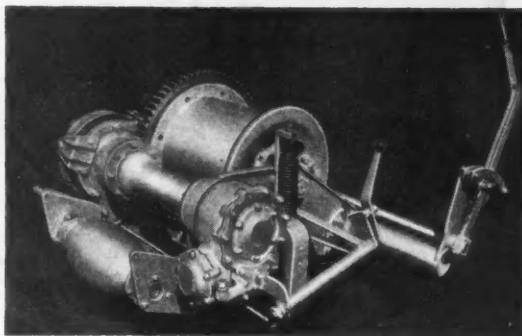
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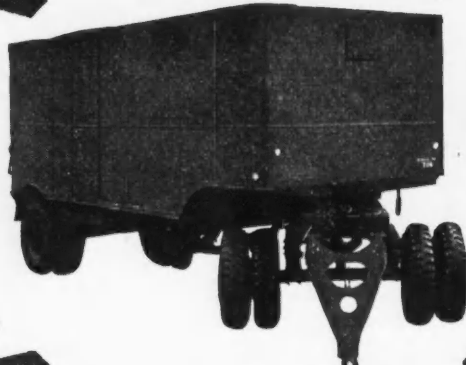
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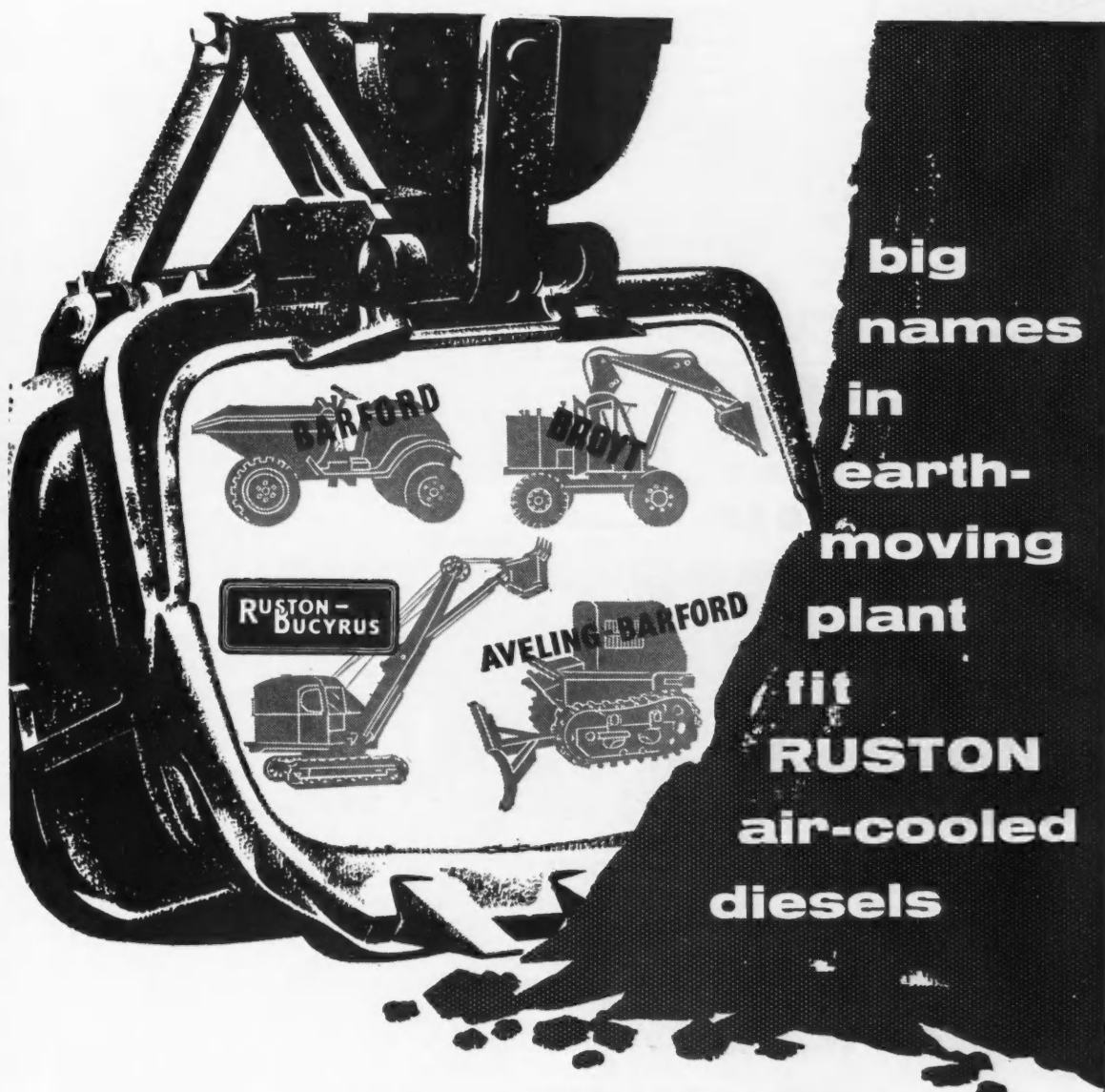
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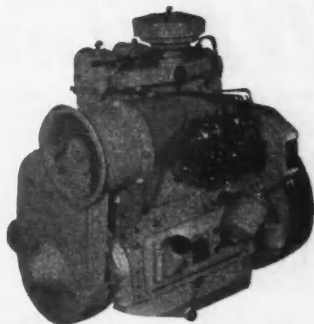
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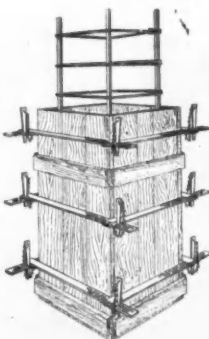
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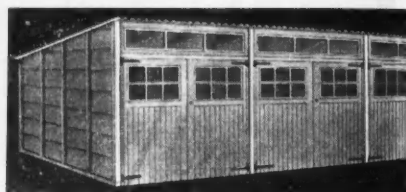
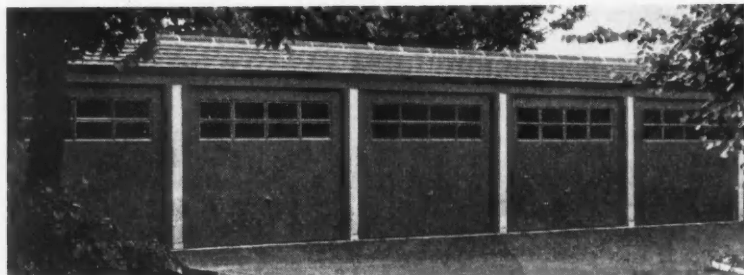
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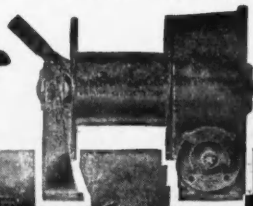
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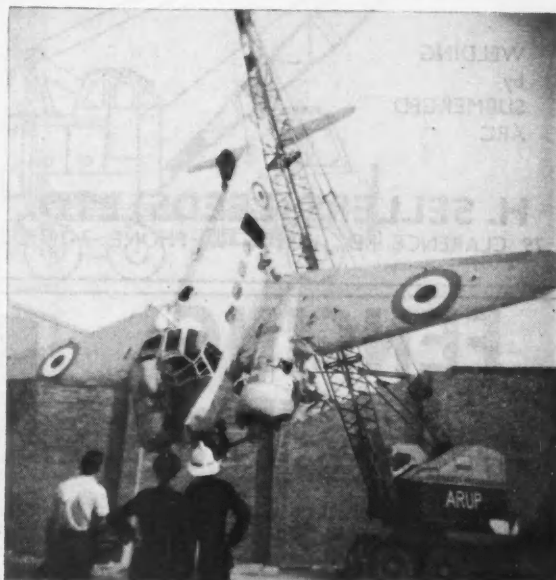
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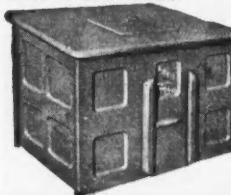
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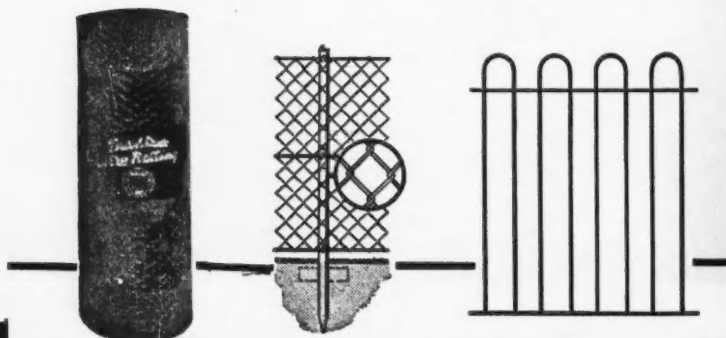
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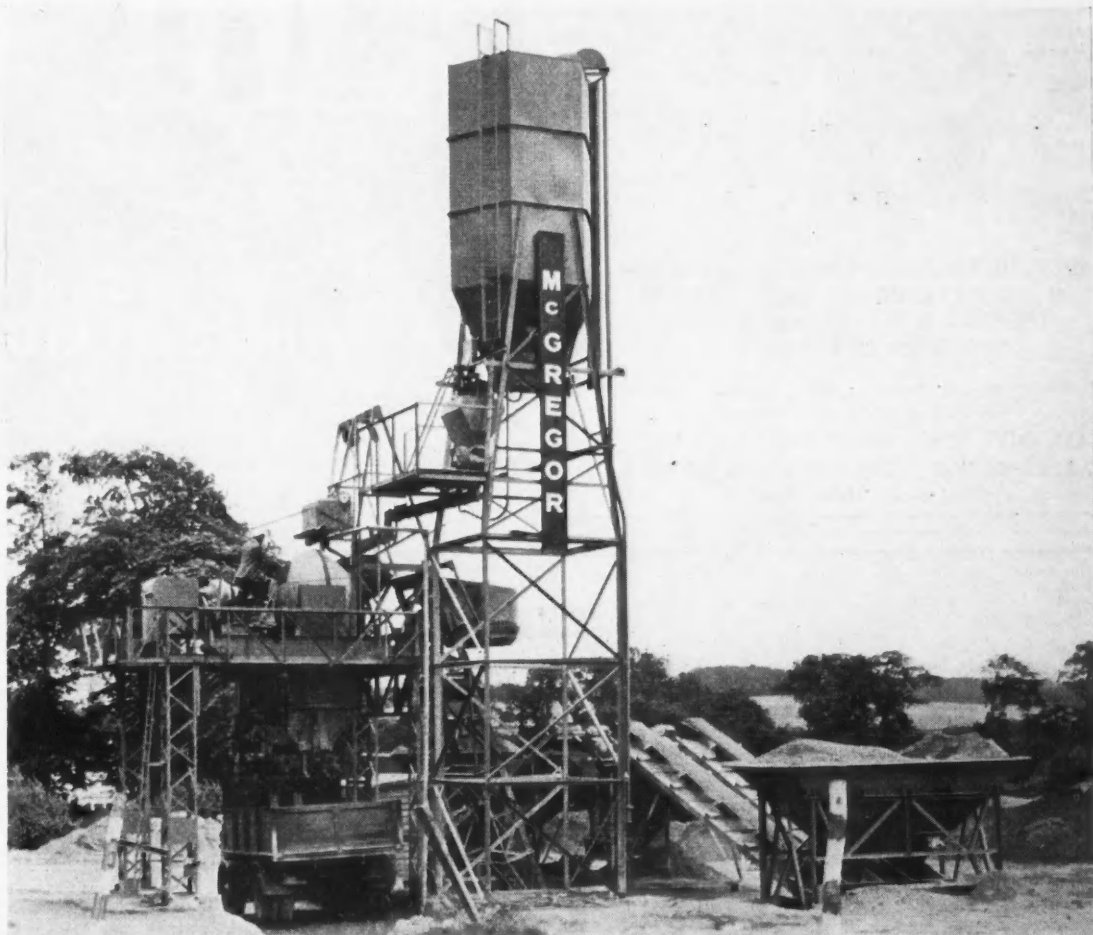
ROWLEY PLANT Co. Ltd.

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COMPACTORS ENGINEERING LTD.

LOCKFIELD AVENUE, BRIMSDOWN, ENFIELD, MIDDX. TELEPHONE: HOWARD 4063-5

THE "SPLIT DRUM" MIXER



Photograph by courtesy of R. R. Dalton Esq., B.Sc., M.Inst.M. & C.E., A.M.I.Struct.E., M.R.San.I., County Surveyor of Kesteven, Lincs.

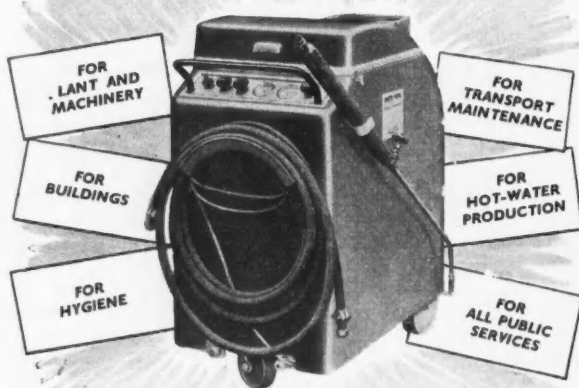
The illustration shows a S.G.M.E. Concrete Mixing and Batching Plant working at Messrs. Robert McGregor & Sons, Ltd., Grantham By-Pass Contract. The Plant consists of a S.G.M.E. "Split Drum" Mixer, a 28-ton capacity Cement Silo, two 2-compartment Aggregate Bins, four short Conveyors and an Aggregate Weighbatcher. The equipment is automatic and all operations are controlled by one man from the Mixer Platform. The installation is very simple, it is easily and quickly erected, it has a large output (average 500 cu. yds. per day), it is equally suitable for dry-lean and high grade concrete and the switch over from one type of concrete to another is instantaneous. This Plant is one of a large number of installations working up and down the country on roads, runways and factories in ready mixed concrete works to the fullest satisfaction of the users.]

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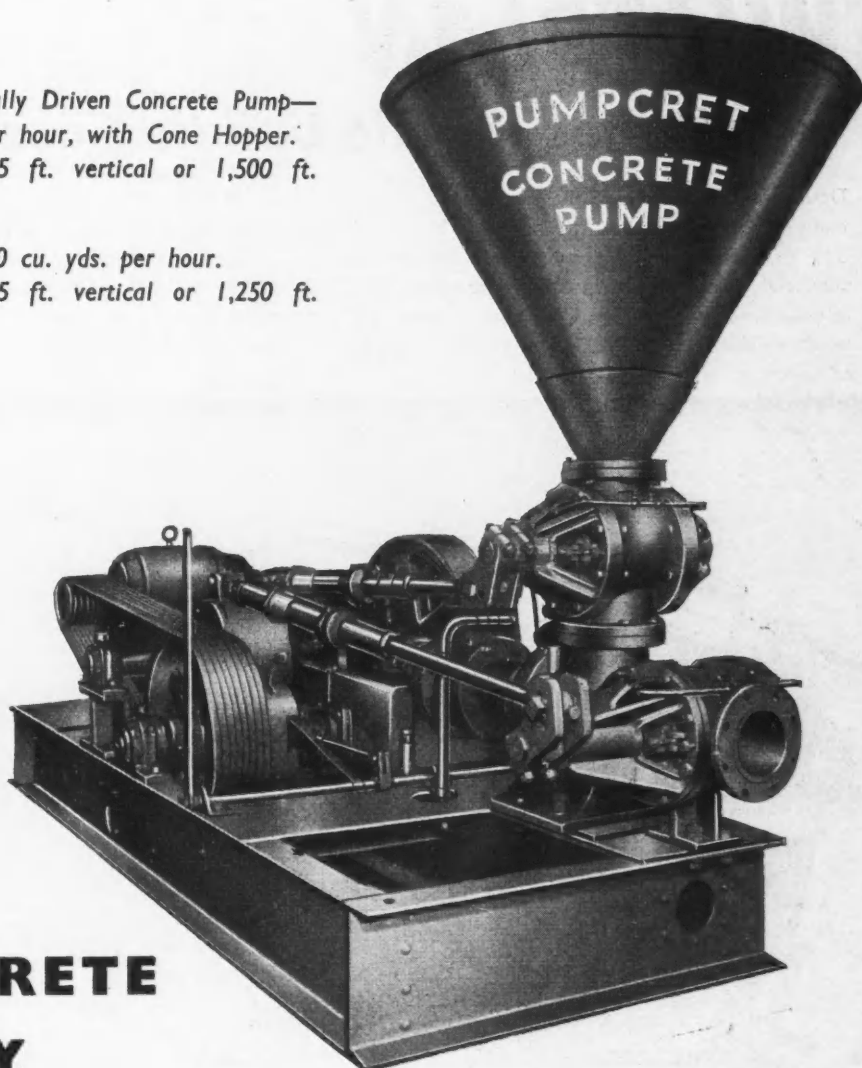
A 'bloom'—free, tough and durable coating specially recommended for both interior and exterior wood and metal surfaces. Available in 52 standard colours 'Superlative' dries in 8/10 hours to give a long lasting finish of exceptional beauty . . . and supreme water/weather resistance.

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Range up to 125 ft. vertical or 1,250 ft.
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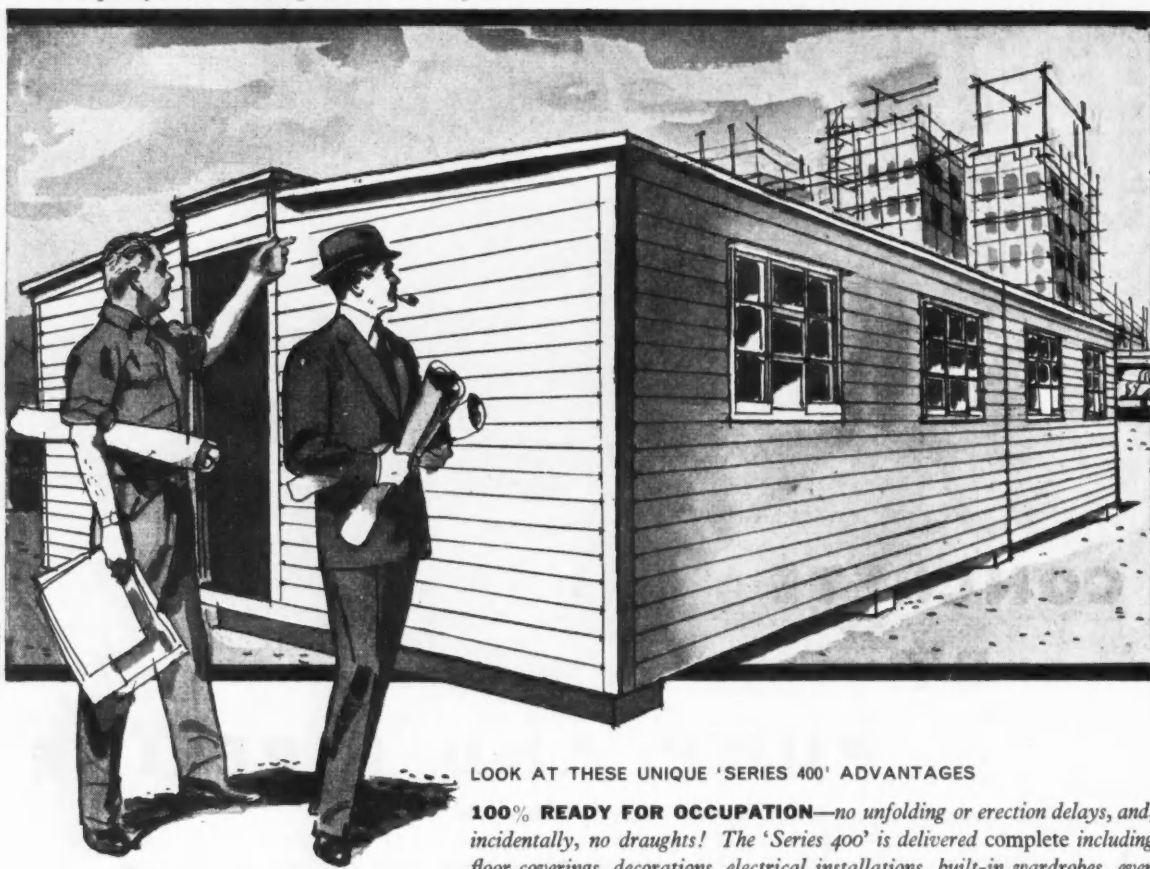
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slashes mobile building costs!

Designed specially to save the contractor money — that's the point about Swiftplan 'Series 400' buildings! These single and multiple mobile buildings provide comfortable site offices, dormitories, ablutions etc., at prices far below those of any comparable system. And yet they maintain to the full Swiftplan's high standards of quality materials and good workmanship!

How is it done? By the use of a new, *rigid*-construction principle—one that has many practical advantages over and above the question of economy.

It will pay you to know more about these remarkable time-and-money-savers — write now for full details.



LOOK AT THESE UNIQUE 'SERIES 400' ADVANTAGES

100% READY FOR OCCUPATION—no unfolding or erection delays, and, incidentally, no draughts! The 'Series 400' is delivered complete including floor coverings, decorations, electrical installations, built-in wardrobes, even bedding, curtains, desks, etc., as required.

THE ULTIMATE IN MOBILITY. Swiftplan 'Series 400' can be moved from site to site with the entire contents undisturbed. All doors can be locked. No damage is caused to decorations during removal.

MINIMUM FOUNDATION COSTS. Timber sleepers or concrete strips are normally all that is required and, of course—100% recovery value!

Swiftplan Series 400 Mobile Buildings will save you time and money on your next contract, large or small, and will continue to do so every time they are re-sited. Write now for details.



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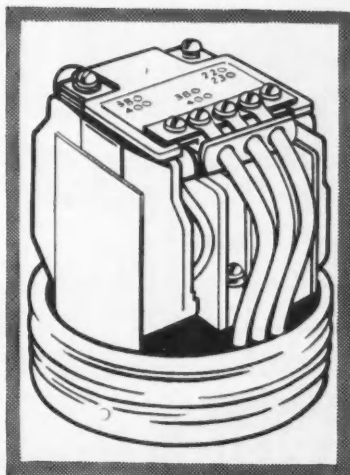


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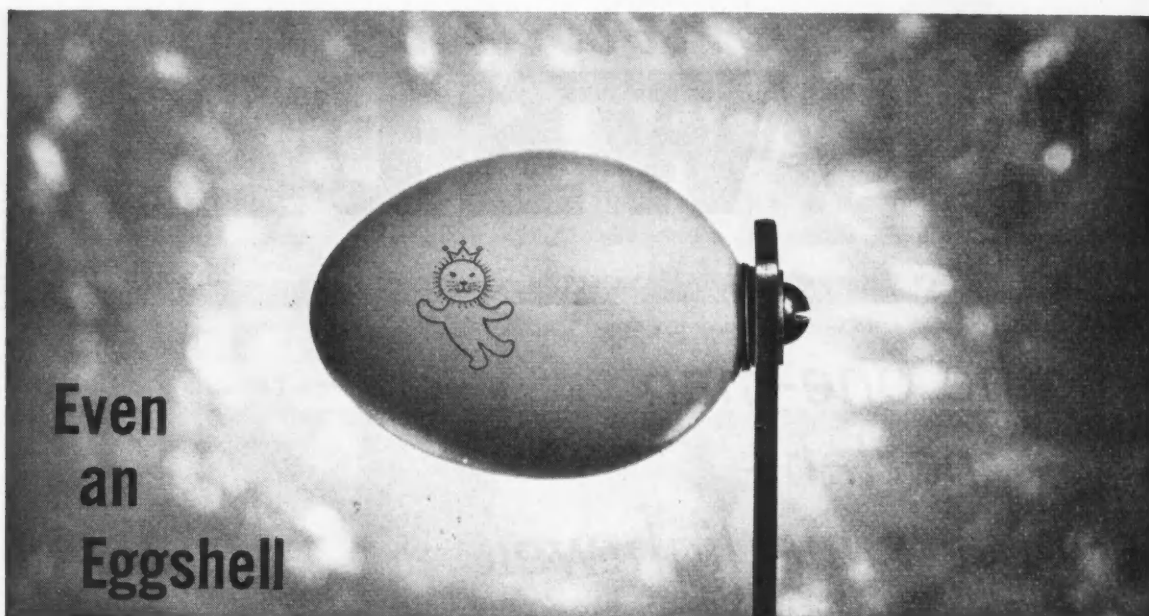
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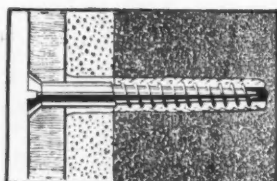
can
be
Screw-fixed with a **RAWLPLUG
FIXING DEVICE!**

If you live to a hundred, you are unlikely to want to do much screw-fixing of eggshells! Yet this feat—possible only with a Rawlplug Fixing Device (a Rawlnut)—does serve to highlight the astonishing effectiveness of these Devices in making 'difficult' and even 'impossible' fixings simple and straightforward. Whatever the screw or bolt fixing job, you'll save time, money and temper by using the appropriate Rawlplug Fixing Device.

RAWLPLUGS

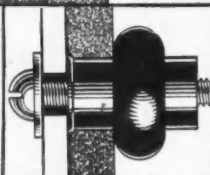
The famous Rawlplug makes firm screw fixings in masonry in a mere fraction of the time taken by any other method.

For all screw sizes up to $\frac{1}{2}$ " diam. coach screws.



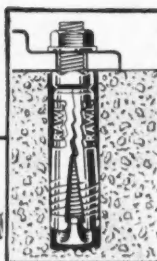
RAWLNUTS

The amazing Rawlnut forms its own 'rivet head' behind the material when screwed up from the front. Shakeproof and waterproof, it has many valuable uses in both building and manufacture.



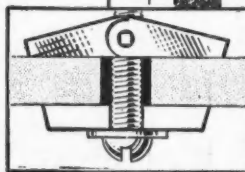
RAWLBOLTS

For light or heavy bolting jobs. A dry fixing of enormous strength—no cold chiselling, no waiting for cement to harden. In all bolt diameter up to 1".



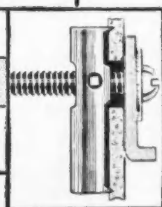
SPRING TOGGLES

For making firm fixings to such thin and structurally weak materials as plasterboard, ceilings, etc. The wings of the device spring apart behind the material and spread the load over a wide area.

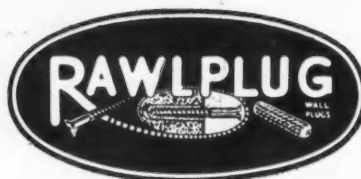


GRAVITY TOGGLES

Passed through a hole in hollow material, the long member falls into a vertical position by gravity, and is then drawn against the back of the material by screwing from the front.



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FIXING DEVICES *For Speed and Strength!*

The World's largest manufacturers of fixing devices
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IN ALL WEATHER*

The raincoats worn by these Belgian policemen are made from Plasoco — the outstanding material for all-weather garments. Absolutely waterproof, resistant to flexing and abrasion, proof against oil, grease, sea water and weak chemicals, Plasoco really protects. Available in the piece or made up in garments to specification.

Samples and prices on request.

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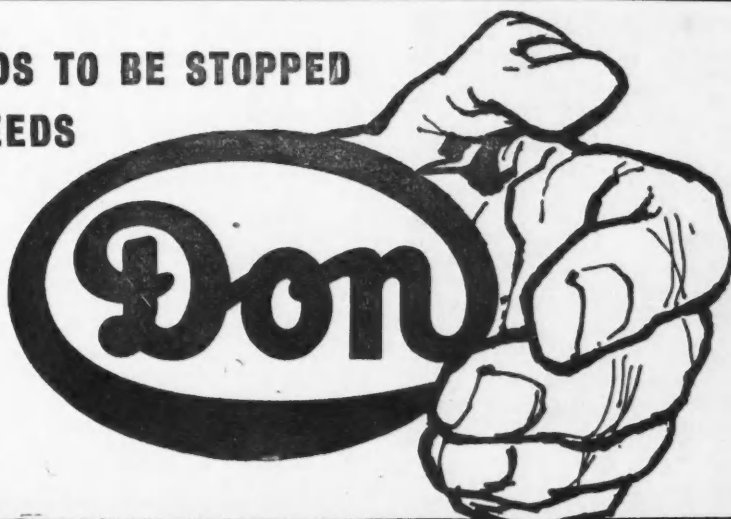
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Advertiser's Announcement**SALESMAN'S PROGRESS**

Part One in the Story of a Modern Organisation geared to supply a vital and growing industry.

By a Special Correspondent

The Salesman has reached a new level in society. Today he is respectable and respected and there are very good reasons why he should be. For today in most fields of industry he is a technical specialist, a consultant with a thorough knowledge of the product he sells, a man who finds out about the customer's needs, and who will not attempt to sell a product for which his potential customer may not have a profitable use.

All this may sound a little Utopian but it does reflect the facts.

Knowing the Industry

Certainly it is so in the case of Bowmaker (Plant) Limited, the organisation responsible for selling the complete line of Caterpillar products in the Midlands, Wales and the South and West of England. A score of Salesmen cover this area. These sales consultants know earthmoving through and through, know what a user ought to expect from his equipment, and exactly what sort of equipment he needs to run his business at peak efficiency and with the greatest margin of profit.

Experience Counts

Caterpillar has more than 50 years of experience in designing and building earthmoving machinery, and each Bowmaker Plant salesman is an extension of this experience. The process of development and improvement is a continuous one, and it is no small part of Bowmaker's policy to keep the sales staff fully-up-to-date, not only with improvements in the Caterpillar range of products, but also with the latest advances in the industry as a whole. This is achieved by refresher courses and regular training sessions to keep them well informed about their customers' problems and of the solutions that Caterpillar-built equipment provide.



The Bowmaker Sales Staff

'Trade-Ins'

Today it is normal practice for the buyer of new equipment to trade in an old machine in part exchange and Bowmaker (Plant) Limited welcome this practice. The price they can pay for a used machine is, of course, governed by the price at which they can re-sell it when it has been repaired, overhauled or rebuilt, and by the speed with which a market for it can be found. The Sales staff, knowing the industry as they do, are exceptionally well qualified to find outlets for used equipment, and their activities range not only throughout the United Kingdom, but to almost every part of the world where demands for such products exist. These activities render an important service to the earthmoving and materials handling industries.

Service and Size

Some people hold that personal service comes only from small organisations. But high standards of service in this industry

require a great deal of money and extensive resources. Many hundreds of thousands of pounds are invested in stocks of new and used machines making up the largest range of earthmoving equipment in the world. Buildings and facilities must be commensurate with the size of the selling organisation and recent growth in these directions at Bowmaker (Plant) Limited has placed the company in the bracket of large organisations. Nevertheless, a standard of personal service is always maintained and results in a happy combination of "large company" resources and "small company" relationships.

Science or Guesswork?

Ground	Level
V1 = 1,400ft./sec.	
Subsoil	
2ft. 0in.	2ft. 0in.
V2 = 7,500 ft./sec.	
Bedrock	
18ft. 0in.	18ft. 0in.
V3 = 11,000ft./sec.	
Harder Layer	

These figures are readings obtained with a Portable Refraction Seismograph operated by a demonstration team from Bowmaker (Plant) Limited to determine whether or not a hydraulically mounted ripper could be used instead of explosives to shatter rock at a quarry in North Wales. The complete investigation showed that ripping was a practicable and profitable operation here, with a cost per ton at 6d., compared with 1s. 1d. if blasting had been used.

This is just one example of the sort of help a well organised Sales Department can offer a potential user.

Here is another. Take a look at this Machine Analysis:—

$$\text{Average Haul} = \frac{\text{Station Yards}}{\text{Net cut, Bank cu. yd.}} = \frac{3418609 \times 10^3}{1195187} = 2,860\text{ft.}$$

$$\text{Hourly Production} = 2,860\text{ft. one way haul.}$$

$$\text{Cat No. 619B/442B Haul 4th, Return 5th} = \frac{145 \text{ bank cu. yd.}}{\text{per 60 min. hr.}}$$

$$\text{Production per 50 min. hour} = \frac{145}{60} \times 50 = 121 \text{ bank cu. yd./hr.}$$

$$\text{Machine hours required} = \frac{\text{Total Cut}}{\text{Hourly Production}} = \frac{1054997}{121} = 8,719 \text{ hours}$$

$$\text{Fleet hours available} = \text{for earthwork completion in 32 fifty hour weeks} = 1,600 \text{ hours.}$$

$$\text{Number of units required} = \frac{\text{Machine Hours}}{\text{Fleet Hours}} = \frac{8,719}{1,600} = 6$$

$$\text{Average Cycle Time No. 619B/442B} = 5.92 \text{ min.}$$

$$\text{Average push cycle D8H} = 1.50 \text{ min.}$$

$$\text{No. of Haul Units per pusher} = \frac{5.92}{1.50} = 3.$$

$$\text{No. of push tractors required} = 2.$$

This is the kind of information which the Earthmoving Representative of Bowmaker (Plant) Limited would compile in connection with tenders for a Motorway. Here, 1,250,000 yd. of material were to be moved in eight months. The analysis shows how many Caterpillar-built machines would be required to do the job in the time available, and this information is distributed to all interested contractors as part of the service the department normally supplies.

The Advantages of Hire Purchase

A discriminating plant owner can today borrow money in this way to earn greater profits than the interest he pays. Bowmaker (Plant) Limited, through their Associated Companies, are in this business too, and can, at short notice, arrange credit transactions on attractive terms.

The Sales Organisation of Bowmaker (Plant) Limited, Authorised Caterpillar Dealer, is available to the industry from five strategically placed depots. These are at Noose Lane, Willenhall, Staffs. (Tel: Willenhall 696); Colchester Avenue, Colchester Trading Estate, Cardiff (Tel: Cardiff 45661); Fenny Bridges, Honiton, Devon (Tel: Feniton 206); Hulse Road, Salisbury, Wilts. (Tel: Salisbury 4965); and Chesterfield Road, Clay Cross, Derbyshire (Tel: Clay Cross 2571).

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

CONTRACTS

LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.
TO ALL BUILDING CONTRACTORS.

APPROVED LIST OF BUILDING CONTRACTORS.

Firms desirous of having their names included in an approved list of contractors from whom the Lancashire County Council will invite TENDERS for NEW BUILDING and other WORKS should make application to the County Architect, P.O. Box 26, County Hall, Preston, Lancashire.

The lists are as follows:—
(1) Contracts estimated to cost over £15,000 and up to £50,000.
(2) Contracts estimated to cost over £50,000 and up to £100,000.
(3) Contracts estimated to cost over £100,000.
Contractors may apply for their name to be included in any one or more of the lists.
Applications must be made on forms obtainable from the COUNTY ARCHITECT at the address given above, and returned on or before 12th SEPTEMBER, 1960.

Tenders will be considered only from contractors included in the official lists, which will be revised from time to time by the County Council after the consideration of applications.

BEDFORDSHIRE COUNTY COUNCIL.

LONDON-EDINBURGH-THURSO TRUNK ROAD, A.1.
DIVERSION AT GIRTORD.

TENDERS are invited for the CONSTRUCTION OF DUAL CARRIAGEWAYS from NORTH OF BEESTON TO GIRTORD SIDINGS RAILWAY BRIDGE, overall length approximately 1½ miles. Included in the Contract is the Construction of a New Bridge and Flood Arches over the River Ivel, Steel Flood Arches, Earthworks and Drainage.
Copies of the Conditions of Contract, Specification, Bills of Quantities and Selected Drawings can be obtained from the County Surveyor, Denta Road, Bedford, on payment of a deposit of 10 Guineas, which will be returned on receipt of a bona-fide Tender and the return of the Drawings before the closing date.

The remaining uncoloured Contract Drawings may be obtained on loan for the sum of Six Guineas, Three Guineas of which will be refunded on their return.
Tenders, in the envelope provided and not bearing any name or mark indicating the sender must be delivered to the undersigned not later than 30th SEPTEMBER, 1960.

The Contract is subject to the approval of the Minister of Transport, and the Council do not bind themselves to accept the lowest or any Tender.

GEORGE BREWIS,
Clerk of the County Council.

Shire Hall,
Bedford.
August, 1960.

CAMBRIDGESHIRE COUNTY COUNCIL.
RECONSTRUCTION OF CAMBRIDGE-POTTON ROAD, A.603.

CONTRACT NO. 6016.

TENDERS are invited for the RECONSTRUCTION of approx. 1,000 lin. yd. of the ABOVE ROAD, comprising Precast Concrete Channelling, Widening of Broken Concrete, Hand-laid Gravel Asphalt, and ancillary Works. Machine-laid surfacing does not form part of this Contract.

Documents in respect of the work may be obtained from the County Surveyor, MR. R. LACEY, M.I.C.E., at the address below.

Tenders, in the official envelope, must reach the undersigned not later than 9 a.m., WEDNESDAY, 14th September, 1960.

CHARLES PHYTHIAN,
Clerk of the Council.

Shire Hall,
Castle Hill,
Cambridge.

CAMBRIDGESHIRE COUNTY COUNCIL.

CONSTRUCTION OF A ROUNDABOUT ON THE LONDON-NORWICH TRUNK ROAD (A.11) AT STETCHWORTH TOLL.

CONTRACT NO. 6017.

TENDERS are invited for the CARRYING-OUT OF THE ABOVE WORKS, which will comprise the PLACING of approx. 44,000 cu. yd. of GRANULAR FILL, the CONSTRUCTION of 11,000 sq. yd. of CARRIAGEWAY, KERBING, SURFACE WATER DRAINAGE, and ancillary works.

Documents in respect of the work may be obtained from the County Surveyor, MR. R. LACEY, M.I.C.E., Shire Hall, Castle Hill, Cambridge.

Tenders, in the official envelope, must reach the undersigned not later than 9 a.m. on TUESDAY, 27th September, 1960.

CHARLES PHYTHIAN,
Clerk of the Council.

Shire Hall,
Castle Hill,
Cambridge.

NOTTINGHAMSHIRE COUNTY COUNCIL.

KING'S LYNN-SLEAFORD-NEWARK TRUNK ROAD, A.17.

RECONSTRUCTION OF BEACON HILL RAILWAY BRIDGE, NEWARK.

TENDERS are invited for the DEMOLITION OF THE EXISTING RAILWAY BRIDGE, the CONSTRUCTION OF a NEW BRIDGE comprising Three Spans of 32ft., 34ft. 6in. and 27ft. 3in. in Composite Prestressed Construction, supported on Mass Concrete Abutments and Reinforced Concrete Piers, the Provision of Earth Embankments and the Construction of approx. 500 yd. of Roadworks.

Contract documents may be obtained from the County Surveyor, Shire Hall, Nottingham, on payment of £10 deposit, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn and the return of the Contract Drawings.

Tenders, in the envelopes provided, should be delivered to the undersigned not later than First Post on FRIDAY, 30th September, 1960.

The Council do not bind itself to accept the lowest or any Tender.

A. R. DAVIS,
Clerk of the County Council.

CITY OF MANCHESTER.

DAVYHULME SEWAGE WORKS EXTENSIONS—STAGE 1B.

TENDERS invited for CONSTRUCTION OF PRE-ARRANGED AND PRIMARY SEDIMENTATION PLANT, comprising Eight Sedimentation Tanks each 146ft. dia., and appurtenant works.

Documents, returnable by 31st OCTOBER, 1960, from CITY SURVEYOR, Town Hall, Manchester, 2.

CONTRACTS

COUNTY BOROUGH OF BRIGHTON.

WATER DEPARTMENT.

PATCHAM PUMPING STATION—CONTRACT NO. 4.

STERILISATION PLANT.

TENDERS invited for the MANUFACTURE, DELIVERY, ERECTION AND SETTING TO WORK OF STERILISATION EQUIPMENT at the ABOVE PUMPING STATION.

Copies of General Conditions of Contract, Drawings, Specification and Form of Tender obtainable from the Chief Engineer, 12 Bond Street, Brighton, 1. Deposit of £2 2s. will be refunded on receipt of a bona-fide Tender and return of documents supplied.

Tenders, enclosed in plain sealed envelopes, not bearing any name or mark indicating the sender and endorsed "Patcham—Contract No. 4—Sterilisation Plant," must be delivered to me before Noon on FRIDAY, 30th September, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

W. O. DODD,
Town Clerk.

Town Hall,
Brighton.
August, 1960.

COUNTY BOROUGH OF BRIGHTON.

WATER DEPARTMENT.

BEVEDEAN RESERVOIR.

TENDERS invited from experienced contractors for the CONSTRUCTION OF 1½ MILLION GALLON REINFORCED CONCRETE RESERVOIR, and ancillary Works, at BEVEDEAN, Brighton.

Specification, Bill of Quantities and Contract documents obtainable from Chief Engineer, 12 Bond Street, Brighton. Deposit of £5 5s. will be refunded on receipt of a bona-fide Tender and return of documents supplied.

Tenders, enclosed in plain sealed envelopes, not bearing any name or mark indicating the sender and endorsed "Tender for Bevedean Reservoir," to be delivered to me before Noon on FRIDAY, 30th September, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

W. O. DODD,
Town Clerk.

Town Hall,
Brighton.
August, 1960.

COUNTY BOROUGH OF BRIGHTON.

WATER DEPARTMENT.

PATCHAM PUMPING STATION.

REMOTE AUTOMATIC CONTROL EQUIPMENT.

FIXED-PRICE TENDERS invited for the MANUFACTURE, DELIVERY, ERECTION, TESTING AND SETTING IN OPERATION Equipment for Remote and Local Automatic Control of Electrically Driven Submersible Well and Surface Booster Pumps.

Specification and particulars from Chief Engineer, Water Department, 12 Bond Street, Brighton, on payment of Two Guineas deposit, to be refunded on receipt of a bona-fide Tender and return of all documents.

Tenders, in plain sealed envelopes, endorsed "Remote Control—Patcham Pumping Station," to be delivered to me by Noon on 30th SEPTEMBER, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

W. O. DODD,
Town Clerk.

Town Hall,
Brighton.
15th August, 1960.

BOROUGH OF NEWBURY.

SEWAGE EFFLUENT PUMPING STATION AND RISING MAIN.

TENDERS are invited for the CONSTRUCTION OF a SEWAGE EFFLUENT PUMPING STATION, together with 300 lin. yd. of 21in. RISING MAIN, and ancillary Works.

Forms of Tender and Bills of Quantities may be obtained from the Borough Surveyor, Municipal Buildings, Newbury, at whose office Plans and General Conditions may be inspected.

Sealed Tenders endorsed "Sewage Effluent P.S." must be delivered to the undersigned not later than MONDAY, 12th September, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

LESLIE SOUTHERN,
Town Clerk.

BOROUGH OF HEYWOOD.

ERECTION OF PRECAST CONCRETE GARAGES.

TENDERS are invited for the ERECTION OF 25 PRECAST CONCRETE GARAGES ON THREE SITES.

Specification, Site Plan and Form of Tender may be obtained from A. MIDDLETON, B.Sc., M.I.C.E., Borough Engineer and Surveyor, Municipal Buildings, Heywood, on payment of a deposit of £1 1s., to be refunded on receipt of a bona-fide Tender and the return of all Contract documents.

Tenders must reach the undersigned not later than First Post on MONDAY, 12th September, 1960, in the envelope provided and endorsed "Prefabricated Garages."

The Council does not bind itself to accept the lowest or any Tender.

W. R. PARKER,
Town Clerk.

Municipal Buildings,
Heywood.
15th August, 1960.

CITY OF YORK.

STREETS AND BUILDINGS COMMITTEE.

9IN. DIA. FOUL SEWER—MIDDLETHORPE.

TENDERS are invited for the CONSTRUCTION OF approx. 950 lin. yd. of CONCRETE PIPE SEWERAGE, CONCRETE MANHOLES, and ancillary works.

The General Conditions of Contract and Drawings may be inspected at, and the Specification, Bills of Quantities and Form of Tender obtained from the Office of the undersigned on payment of a deposit of £2 2s. (refundable on receipt of a bona-fide Tender not subsequently withdrawn).

The completed Form of Tender shall be delivered to the undersigned, in the official printed Tender envelope, sealed and endorsed "Middlethorpe Sewerage," not later than Noon on TUESDAY, 13th September, 1960.

The lowest or any Tender will not necessarily be accepted.

CHAS. J. MINTER,
City Engineer, Surveyor and Planning Officer.

7 St. Leonard's Place,
York.

CONTRACTS

HASTINGS CORPORATION.

The above Corporation invite TENDERS for the WIDENING OF EXISTING CARRIAGEWAY, PROVISION OF FOOTWAYS AND SURFACE WATER SEWER IN GILLSMAN'S HILL (Hollington Stream to Wishing Tree Road) and WISHING TREE ROAD (Gillsmans Hill to Crowhurst Road), approx. 500 lin. yd.

Specification, Bill of Quantities, Form of Tender, General Conditions of Contract and Drawings may be obtained from the Borough Engineer, 37 Wellington Square, Hastings, on receipt of a deposit of £2 2s., returnable on receipt of a bona-fide Tender.

Tenders, in envelopes provided, must be received by the undersigned not later than 10 a.m. on MONDAY, 19th September, 1960. The priced Bill of Quantities is to be deposited with the Borough Engineer at the same time.

The Council do not bind themselves to accept the lowest or any Tender.

N. P. LESTER,
Town Clerk.

Town Hall,
Hastings.

CITY OF ROCHESTER.

MAKING-UP OF OLD PATTEENS LANE—STAGE 1—CITY WAY TO BOUNDARY ROAD.

CONSTRUCTION OF ROADS AND SEWERS.

TENDERS are invited for the CONSTRUCTION OF approx. 850 sq. yd. of HARDCORE TARMACADAM CARRIAGEWAY, KERBING, PRECAST CONCRETE SLAB PAVING, 100 lin. yd. of 9in. dia. SURFACE WATER SEWER, and ancillary works.

Drawings and General Conditions of Contract may be seen at the Office of J. A. PEEL, A.M.I.C.E., M.I.Mun.E., City Surveyor, 66 Maidstone Road, Rochester, during normal working hours, and from whom the Form and Conditions of Tender, Special Conditions of Contract, Specification and Bill of Quantities may be obtained on payment of a deposit of £2 2s., which will be refundable on the acceptance of a bona-fide Tender.

Tenders must be delivered to the undersigned, in the manner detailed in the above documents, not later than 12 Noon on FRIDAY, 16th September, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,
Town Clerk.

Guildhall,
Rochester, Kent.
18th August, 1960.

BANSTEAD URBAN DISTRICT COUNCIL.

BRIGHTON ROAD, A.217—IMPROVEMENT AT MARGERY LANE JUNCTION.

TENDERS are invited for the REALIGNMENT AND IMPROVEMENT OF BRIGHTON ROAD, A.217, at its JUNCTION WITH MARGERY LANE, LOWER KINGSWOOD.

The Works comprise the Construction of 1,650 sq. yd. Lean Mix Concrete Carriageway Foundation, 300 yd. Dense Tar Base Course, 3,500 sq. yd. Rolled Asphalt Surfacing, 500 lin. yd. Kerbing, together with Surface Water Drainage Works, the Construction of Grass Verges and various ancillary works.

Specifications and Bills of Quantities may be obtained from, and Conditions of Contract and Drawings may be inspected at, the office of the Engineer and Surveyor upon a payment of deposit returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Tender for Brighton Road A.217—Margery Lane Improvement," must be returned to the undersigned not later than TUESDAY, 20th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. L. SHAW,
Clerk of the Council.

The Council House,
Brighton Road,
Banstead, Surrey.
16th August, 1960.

SAWBRIDGEWORTH URBAN DISTRICT COUNCIL.

SHEERING MILL LANE ROAD IMPROVEMENT.

FIXED-PRICE TENDERS are invited for the RESURFACING OF approx. 2,570 sq. yd. of CARRIAGEWAY, and incidental works, at Sheering Mill Lane.

General Conditions of Contract, Specifications, Bills of Quantities and Form of Tender may be obtained from the Surveyor, Council Offices, Sawbridge, Herts.

Tenders, in plain sealed envelopes endorsed "Sheering Mill Lane," must reach the undersigned not later than 12 Noon on MONDAY, 19th September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. GODFREY,
Clerk of the Council.

Council Offices,
Sawbridge, Herts.

SAFFRON WALDEN RURAL DISTRICT COUNCIL.

ASHDON SEWERAGE AND SEWAGE DISPOSAL.

TO CONTRACTORS.

The above-named Council invite TENDERS for the EXECUTION OF SEWERAGE AND SEWAGE DISPOSAL WORKS, comprising the Furnishing and Laying of about 3,500 yd. of 6in. and 4in. dia. Stoneware and Spun-iron Pipe Sewers and Pumping Mains, Manholes, etc., and the Construction of a Sewage Pumping Station, Sedimentation Tanks, Percolating Filter, Humus Tank, Sludge Drying Beds, Pipework, and other appurtenant works.

Contractors desirous of tendering are requested to send their names and addresses to D. BALFOUR AND SONS, M.M.I.C.E., 131 Victoria Street, Westminster, London, S.W.1, accompanied by a cheque deposit of £10 made payable to the Saffron Walden Rural District Council, not later than 12th SEPTEMBER, 1960, after which full particulars will be forwarded. The deposit will be returned on receipt of a bona-fide Tender and the receipt of all printed documents after the Contract has been let.

It is essential that the contractors shall have had considerable experience in similar work and be prepared to furnish security with an approved society for the fulfilment of the Contract.

The lowest or any Tender will not necessarily be accepted by the Council.

A. W. OVERALL,
Clerk to the Saffron Walden R.D.C.,
Council Offices,
Deiden Road,
Saffron Walden,
Essex.
22nd August, 1960.

CONTRACTS

DERBY COUNTY BOROUGH.
SHARDLOW ROAD HOUSING ESTATE, ALVASTON.**CONSTRUCTION OF ROADS, SEWERS AND ANCILLARY WORKS.**

TENDERS are invited for the CONSTRUCTION of the following approx. lengths of ROADS and SEWERS:

- 636 lin. yd. of 42ft. wide Street.
- 1,682 lin. yd. of 36ft. wide Street.
- 437 lin. yd. of 27ft. wide Street.
- 185 lin. yd. of 15in. dia. Sewer.
- 793 lin. yd. of 12in. dia. Sewer.
- 1,483 lin. yd. of 9in. dia. Sewer.
- 1,011 lin. yd. of 6in. dia. Sewer.

Together with various ancillary works. At the ABOVE-MENTIONED SITE, which is about 3 1/4 miles from the centre of Derby, on the London Road.

Specification, Bill of Quantities, Form of Tender and Drawings may be obtained from the Borough Engineer and Surveyor, The Council House, Derby, upon receipt of a deposit of £5 5s., which will be refunded only upon receipt of a bona-fide Tender, not subsequently withdrawn without a reason satisfactory to the Council, and the return of all Drawings and other documents supplied for the purpose of tendering. Additional Drawings may be inspected at Borough Engineer and Surveyor's Office during normal hours, 9 a.m.-1 p.m., and 2.15 p.m.-5.30 p.m., Monday to Friday.

Tenders, in a plain sealed envelope, endorsed "Tender for Site Works—Shardlow Road Estate," are to reach me by Noon on FRIDAY, 16th September. The Council does not bind itself to accept the lowest or any Tender.

N. S. FISHER,
Town Clerk.

The Council House,
Derby.
August, 1960.

COUNTY BOROUGH OF HUDDERSFIELD.**INNER RING ROAD.****SUPPLY OF BOLLARDS AND ADVANCE DIRECTION SIGNS.**

TENDERS are invited for the SUPPLY of the FOLLOWING ITEMS, to be delivered to the Corporation Highways Depot, Flint Street:—

- (1) 15 Illuminated Bollards with 24in. x 18in. "Keep Left" Panel.
- (2) 25 Illuminated Bollards with 12in. x 9in. "Keep Left" Panel.
- (3) 17 Illuminated Bollards with 12in. x 9in. Plain Panel.

All illumination to be by fluorescent tubes. Specifications must be supplied with the Tenders and delivery periods stated.

(4) 14 Advance Direction Signs and Seven small Direction Signs, together with Single Posts suitable for the signs, and Fittings.

All items to be to B.S.S. 873-1959, and signs to be in accordance with Ministry of Transport Traffic Signs Regulations, 1957.

Tender Forms, Schedules and details may be obtained on application to A. L. PERCY, Esq., M.I.C.E., Borough Engineer and Surveyor, High Street Buildings, Huddersfield.

Sealed Tenders, in the envelope provided, to be delivered to the undersigned not later than 10 a.m. on MONDAY, the 19th September, 1960.

The Corporation does not bind themselves to accept the lowest or any Tender.

HARRY BANN,
Town Clerk.

Town Hall,
Huddersfield.
August, 1960.

BOROUGH OF DROITWICH.**POPLARS MEADOW.**

TENDERS are invited for the CONSTRUCTION of a PLAYING FIELD at POPLARS MEADOW in OMBERSLEY ROAD, Droitwich. The works consist of Land Drainage, Turfing Cricket Square, Levelling and Seeding.

Forms of Tender, Specification and Drawings can be obtained from the Borough Engineer and Surveyor, Town Hall, Droitwich, where the Conditions of Contract may be inspected during usual office hours.

Applications should be accompanied by a deposit of Two Guineas, which will be refunded upon the receipt of a bona-fide Tender and the return of all documents.

Tenders, endorsed "Poplars Meadow," are to be submitted in a plain sealed envelope to the undersigned not later than 10 a.m. on MONDAY, 12th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

S. G. FOSTER,
Town Clerk.

Town Hall,
Droitwich.
22nd August, 1960.

BOROUGH OF TIPTON.**SUMMERHILL BRIDGE DEMOLITION AND REGRADING OF APPROACHES—UPPER CHURCH LANE.**

TENDERS are invited for the DEMOLITION of a 28ft. span CAST-IRON GIRDER BRIDGE with Brick Abutments spanning a disused canal, and the EXCAVATING and REGRADING of the EXISTING ROADWAY, and the CONSTRUCTION of a NEW CARRIAGEWAY, together with Footways and ancillary works.

Contractors desirous of tendering are requested to send their names and addresses to the Borough Engineer and Surveyor, Municipal Buildings, Sedgley Road West, Tipton, accompanied by a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender. Cheques should be made payable to Tipton Corporation.

The Form of Tender, Specification and Bill of Quantities will be forwarded, and the Drawings and General Conditions may be inspected at the above Office.

KENNETH W. MADIN,
Town Clerk.

Municipal Buildings,
Sedgley Road West,
Tipton.

BRENTWOOD URBAN DISTRICT COUNCIL.

TENDERS are invited for SUPPLY and ERECTION of 67 PREFABRICATED CONCRETE GARAGES, with all necessary Bases and Site Works.

Specification and Form of Tender from Engineer and Surveyor, Council Offices, Brentwood, on payment of deposit of £1 1s.

Tenders must reach me by 14th SEPTEMBER.
CLEMENT BOOTH,
Clerk of the Council.

CONTRACTS

BOROUGH OF BROMLEY.**DISPOSAL OF DESTRUCTOR SCREENINGS.**

TENDERS are invited from persons able to: (a) RECEIVE and/or (b) HAUL AWAY and DISPOSE of approx. 7,500 tons of DESTRUCTOR SCREENINGS per annum.

Conditions of Tender obtainable from Borough Engineer, Municipal Buildings, Bromley. Tenders to be received by the Borough Engineer by 14th SEPTEMBER, 1960.

LIONEL KAYE,
Town Clerk.

Municipal Buildings,
Bromley.

BOROUGH OF EALING.**SITE FOR TIPPING—SOUTHERN WORKS, SOUTH EALING ROAD.**

OFFERS are invited for the FILLING-IN of TANKS with, and CONSOLIDATION of, APPROVED MATERIALS of approx. 19,500 cu. yd. capacity, and ancillary works.

Application Form and full particulars from Borough Engineer, Town Hall, Ealing, W.5.

Closing date: 23rd SEPTEMBER, 1960.

E. J. COPE-BROWN,
Town Clerk.

BOROUGH OF MIDDLETON.**WOODHILL REDEVELOPMENT AREA.****ROADWORKS.**

TENDERS are invited for the CONSTRUCTION of the ROADS, including Drainage, Footpath Access, and Decorative Paving Works, within the above-mentioned Redevelopment Area, in Two Phases. The work involves 1,300 sq. yd. of Carriageway, 1,400 sq. yd. of Footways and 1,000 sq. yd. of Decorative Paving and Greens.

Plans may be inspected during normal office hours and copies of the Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the Borough Engineer and Surveyor, Town Hall, Middleton, near Manchester, upon deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender—Roadworks, Woodhill," must be delivered to the undersigned not later than Noon on THURSDAY, 15th September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

F. JOHNSTON,
Town Clerk.

Town Hall,
Middleton,
Near Manchester.
17th August, 1960.

CITY OF SALFORD.**PREPARATION OF FOUR GARAGE SITES AND ERECTION OF 48 CONCRETE GARAGES.**

TENDERS are invited for the SITE WORKS, ERECTION OF CONCRETE GARAGES (Precast Concrete Garages) to be supplied and erected by a nominated sub-contractor, along with incidental work of Paving and Drainage.

Conditions of Contract and Drawings may be inspected at, and Bills of Quantities and Form of Firm-price Tender obtained from, the City Engineer and Surveyor's Department, Town Hall, Salford, 3. Tenders, enclosed in plain sealed envelope endorsed "Garages," to be delivered to the undersigned not later than Noon on THURSDAY, 15th September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. RIBBLESDALE THORNTON,
Town Clerk.

FELIXSTOWE URBAN DISTRICT COUNCIL.**PRIVATE STREET IMPROVEMENT WORKS.**

FIXED-PRICE TENDERS are invited from public works contractors for the MAKING-UP of the FOLLOWING PRIVATE STREETS:

- (1) Part of Rosemary Avenue (approx. 214 lin. yd.);
- (2) Part of Picketts Road (approx. 84 lin. yd.).

The works comprise Surface Water Sewers, Regulating and Consolidating Existing Hardcore Foundations, Laying Tarred Macadam Surfacing, and in-situ Concrete Paving, and incidental works. Copies of the Specification and Bills of Quantities and Forms and Conditions of Tender may be obtained from the Engineer and Surveyor, Town Hall, Felixstowe, on payment of a deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender, accompanied by all the required documents. The Drawings and General Conditions for Works of Civil Engineering Construction may be inspected at his Office.

Tenders, on the prescribed form enclosed in the sealed envelope, bearing no name or mark to indicate the sender, and endorsed "Tender for Private Streets," must be delivered to the undersigned by not later than 12 Noon on WEDNESDAY, 21st September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. W. HARVEY,
Clerk of the Council.

Town Hall,
Felixstowe.

BARNET URBAN DISTRICT COUNCIL.**TURFING AND SEEDING TO THE AREAS AROUND THE FLATS ON THE WHITINGS HILL HOUSING ESTATE.**

The Council invites TENDERS for the TURFING and SEEDING of the AREAS AROUND THE FLATS on the Whitings Hill Housing Estate, the total area being approx. 6,800 super. yd., and other incidental works.

Conditions of Contract may be inspected, and Specification of Works, Bill of Quantities and Form of Tender obtained, on application to the Engineer and Surveyor of the Council, Ravenscroft House, Wood Street, Barnet, on any day (Saturdays excepted) between the hours of 9 a.m. and 5 p.m.

Sealed Tenders must be delivered to the undersigned not later than 12 Noon on SATURDAY, 17th September, 1960, and marked in the top left-hand corner "Whitings Hill Housing Estate Flats." The Council does not bind itself to accept the lowest or any Tender.

ALFRED S. MAYES,
Clerk of the Council.

Municipal Offices,
Wood Street,
Barnet, Herts.
19th August, 1960.

CONTRACTS

BOROUGH OF MARGATE.**CANTERBURY ROAD, WESTGATE-ON-SEA.****SURFACING OF ROADS.**

TENDERS are invited for the SUPPLYING and/or LAYING of BITUMEN MACADAM and BITUMEN GRIT on a recently constructed HIGHWAY in the Town.

Further particulars may be obtained from the Borough Engineer, 38 Grosvenor Place, Margate. Tenders, in sealed envelopes bearing no name or mark indicating the identity of the sender, and endorsed "Road Surfacing," are to be received by the undersigned not later than 12 o'clock Noon on SATURDAY, 17th September, 1960.

T. F. SIDNELL,
Town Clerk.

Town Clerk's Office,
40 Grosvenor Place,
Margate, Kent.
22nd August, 1960.

BOROUGH OF ERITH.**COLD ASPHALT SURFACING—WOOLWICH ROAD.**

TENDERS are invited for the SUPPLY and LAYING by BARBER-GREENE of approximately 680 tons of FINE COLD ASPHALT and the necessary quantity of PRECAST GRANITE CHIPPINGS, in accordance with B.S. 1690.

Tender documents may be obtained from and Conditions of Contract may be inspected at the office of the Borough Engineer and Surveyor, Town Hall, Erith, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders must be on the form provided, enclosed in a sealed envelope endorsed "Tender for Asphalt Surfacing," and should be delivered to the undersigned not later than 12 Noon on WEDNESDAY, 7th September, 1960.

The contractor must be prepared to enter into a formal contract and bond with two sureties for the due performance of the Contract.

The Council do not bind themselves to accept the lowest or any Tender.

J. A. CROMPTON,
Town Clerk.

Town Hall,
Erith,
Kent.

BOROUGH OF WORKINGTON.**RE-LAYING OF WATER MAINS IN JAMES STREET, BROWN STREET AND BRAYTON STREET, WORKINGTON.**

Tenders are invited for the LAYING of approx. 204 lin. yd. of 4in. dia. and 222 lin. yd. of 3in. dia. SPUN-IRON WATER MAINS in James Street, Brown Street and Brayton Street, Workington, together with incidental works.

Specification, Bill of Quantities and Form of Tender may be obtained on application, in writing, to the Borough Engineer and Surveyor, Stoneleigh, Park End Road, Workington.

Tenders, in plain sealed envelopes endorsed "Re-laying of Water Mains in James Street, Brown Street and Brayton Street," must be delivered to the undersigned not later than 12 o'clock Noon on WEDNESDAY, 14th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

G. MCKAY PORTER,
Town Clerk.

Town Hall,
Workington.
26th August, 1960.

BOROUGH OF WORKINGTON.**CLASS "A" STREET LIGHTING.**

TENDERS are invited for the SUPPLY and ERECTION, complete with ancillary works, of 62 CLASS "A" CONCRETE COLUMNS, with Sodium Discharge Lanterns.

Specification, Bill of Quantities and Form of Tender may be obtained on application, in writing, to the Borough Engineer and Surveyor, Stoneleigh, Park End Road, Workington.

Tenders, in plain sealed envelopes endorsed "Class A Street Lighting," must be delivered to the undersigned not later than 12 o'clock Noon on WEDNESDAY, 14th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

G. MCKAY PORTER,
Town Clerk.

Town Hall,
Workington.
26th August, 1960.

CITY OF GLOUCESTER.**ACCELERATION AND DECELERATION LANES.**

TENDERS are invited for approx. 900 sq. yd. of NEW CARRIAGEWAY CONSTRUCTION in FINLAY ROAD etc.

Form of Tender, Conditions of Contract, Specification and Bill of Quantities may be obtained from the City Engineer and Surveyor, 21 Eastgate Street, Gloucester, on receipt of a deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

The Tender, enclosed in a plain sealed envelope endorsed "Tender for Finlay Road Acceleration Lanes," is to be delivered to the undersigned not later than 12 Noon on WEDNESDAY, 14th September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

A. G. W. BOGGOON,
Town Clerk.

Guildhall,
Gloucester.

PETERSFIELD STANDING JOINT COMMITTEE OF ROTARY ROUND TABLE AND CHAMBER OF COMMERCE.**PROPOSED PETERSFIELD AND DISTRICT SWIMMING POOL.**

TENDERS are invited for the CONSTRUCTION of an OPEN-AIR SWIMMING POOL, and ancillary works.

The documents can be obtained from J. THOMAS, A.M.I.C.E., Engineer and Surveyor, Petersfield Urban District Council, Town Hall, Petersfield, Hants, and are to be returned to me, in sealed envelopes endorsed "Swimming Pool," not later than 22nd SEPTEMBER, 1960.

The Committee do not bind themselves to accept the lowest or any Tender and reserve right to offer sections of the work to different tenderers.

A. RAY,
Hon. Secretary.

c/o 11 Swan Street,
Petersfield,
Hants.

CONTRACTS

SURREY COUNTY COUNCIL.

HIGHWAYS AND BRIDGES DEPARTMENT.

The above Council invite TENDERS for WIDENING CARRIAGEWAY OF LONDON ROAD (A.30 Trunk Road), WINDLESHAM (approx. 500 lin. yd. x 3ft. wide). Surfacing in Hot Rolled Asphalt on Lean-Mix Concrete Foundation. Constructing Kerb and Footpath, and Reshaping Existing Carriageway.

Particulars and Forms of Tender, returnable by 26th SEPTEMBER, 1960, obtainable from COUNTY ENGINEER, County Hall, Kingston-upon-Thames.

BOROUGH OF MAIDENHEAD.

A.308—SIX CROSS-ROADS IMPROVEMENT.

The COUNCIL invites TENDERS for the CONSTRUCTION of approx. 3,000 sq. yd. of DRY LEAN CONCRETE CARRIAGEWAY FOUNDATION; 3,900 sq. yd. of ROLLED ASPHALT and 4,200 sq. yd. of COATED MACADAM BASE and WEARING COURSES on New and Existing Foundations; the PROVISION and LAYING of 1,100 yd. of CAST CONCRETE KERB and SCORIAE BLOCK CHANNEL; the CONSTRUCTION of FOOTWAYS and GRASS AREAS; the PROVISION and LAYING of approx. 1,000 lin. yd. of 15in., 12in., 9in. and 6in. dia. SURFACE WATER SEWERS; Manholes, Gullies, Fencing, etc., together with all incidental works.

Drawings may be seen at, and tender documents obtained from, the Office of the Engineer and Surveyor, 14 Craufurd Rise, Maidenhead, on payment of a deposit of Two Pounds, which will be refunded upon receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Six Cross-roads Improvement," and bearing no mark or indication of the sender, must be delivered to me not later than THURSDAY, 22nd September, 1960.

The Council does not bind itself to accept the lowest or any Tender.

STANLEY PLATT,
Town Clerk.

Guidhall,
Maidenhead, Berks.
August, 1960.

MARKET DRAYTON URBAN DISTRICT COUNCIL.

TENDER—ERECTION OF FLATS, BUNGALOWS AND LOCK-UP GARAGES AND ESTATE ROADS ON LAND BETWEEN STAFFORD STREET AND LONGLANDS LANE, MARKET DRAYTON, SHROPSHIRE.

Builders and contractors are invited to TENDER for the ABOVE SCHEMES. Drawings prepared by MR. J. BRAIN COOPER, F.R.I.B.A., 38 Highfield Road, Edgbaston, Birmingham, 15, and Bills of Quantities prepared by MESSRS. BOND FOSTER AND PARTNERS, 49 Calthorpe Road, Edgbaston, Birmingham, 16.

Tender documents may be obtained from the Quantity Surveyors upon the payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender or the return of all documents. Applications for Tender documents should be made immediately, and the date for the receipt of Tenders by the Clerk of the Council is the 26th SEPTEMBER, 1960.

The Council do not undertake to accept any Tender, and the acceptance of any Tender is subject to the approval of the Ministry of Housing and Local Government.

NORMAN S. BROOK,
Clerk of the Council.

Town Hall,
Market Drayton,
Shropshire.
23rd August, 1960.

HARLOW URBAN DISTRICT COUNCIL.

DISTRICT ROADS IMPROVEMENT.

TENDERS are invited for the FOLLOWING WORKS:

- Reconstruction and Surfacing of approx. 1,330 sq. yd. of Tarmacadam Carriageway, together with Kerb, Drainage, Footpaths, and auxiliary works, at School Lane;
- The Construction of approx. 1,452 sq. yd. of Footpath, Kerbing, and Surfacing of 2,970 sq. yd. Cycle Track, together with auxiliary works, at Latton Street;
- The Construction of approx. 570 sq. yd. of Hogging Footpath, with Two-coat Surface Dressing, at Green Lane, Harlow.

Documents may be obtained from A. W. R. WEBB, A.M.I.C.E., M.I.Mun.E., M.R.S.M., Engineer and Surveyor, Town Hall, Harlow, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender. Cheques should be made payable to Harlow Urban District Council.

Documents, in plain sealed envelopes marked "District Roads Improvement," must be delivered to the CLERK OF THE COUNCIL, Town Hall, Harlow, not later than 12 Noon, SATURDAY, 17th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BALLYMONEY RURAL DISTRICT COUNCIL.

CO. ANTRIM, NORTHERN IRELAND.

The COUNCIL invite TENDERS for the CONSTRUCTION of the ALTAHINCH DAM from contractors experienced in the construction of similar works.

The Dam is of composite construction, the centre 450ft. being a concrete gravity section, and the flanking portions of earthfill. The total length of the Dam being approx. 3,300ft. The site of the Dam is approx. 15 miles south-east of Ballymoney Town.

Applications for the Form of Tender, Specification and Bills of Quantities, accompanied by a deposit cheque for £25, should be made to the Council's Consulting Engineers, MESSRS. WATERHOUSE AND ROUNTHWAITE, 165 Westmoreland Road, Newcastle-upon-Tyne, 4, or at Friends' Provident Buildings, 58 Howard Street, Belfast.

The deposit cheque will be returned only on receipt of a completely priced Bill of Quantities and a bona-fide Tender.

Drawings and Borehole data may be inspected at either Office of the Consulting Engineers and at the Council's Offices, Riada House, Ballymoney, during normal office hours. Copies of the Drawings, which must be returned, may be obtained from the Consulting Engineers on payment of 5s. per copy.

Tenders shall be delivered in plain sealed envelopes clearly marked "Altaahinch Dam," to the undersigned not later than 28th OCTOBER, 1960.

JAMES HANNA,
Clerk to the Council.

Riada House,
Ballymoney,
Co. Antrim,
Northern Ireland.

CONTRACTS

OXFORDSHIRE COUNTY COUNCIL.

HIGHWAYS ACT, 1959.
(Private Street Works Code.)

MILLDOWN ROAD, GORING-ON-THAMES.

TENDERS are invited for the MAKING-UP of MILLDOWN ROAD, Goring-on-Thames, Oxon. Forms of Tender, together with Plans, Specifications and Bills of Quantities, can be obtained from the County Surveyor, 8 New Road, Oxford, to whom they should be returned in a plain envelope endorsed "Milldown Road, Goring-on-Thames," not later than FRIDAY, 16th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

GERALD GALE BURKITT,
Clerk of the Council.

County Hall,
Oxford,
August, 1960.

BOROUGH OF HEYWOOD.

ASPHALT SURFACING—MOUNT STREET, COWBURN STREET, GREEN LANE AND RAILWAY STREET.

TENDERS are invited, on a Fixed-price Basis, in accordance with the Ministry of Housing and Local Government Circular 51/57, for the SUPPLYING and LAYING of approx. 8,000 sq. yd. of ASPHALT SURFACING.

Tender documents may be obtained from the Borough Surveyor, Municipal Buildings, Heywood, on payment of a deposit of £2 2s.

Tenders to be delivered to the undersigned, in the envelope provided, and endorsed "Asphalt Surfacing—Various Streets," and to be received by the First Post on SATURDAY, the 8th October, 1960.

The Council do not bind itself to accept the lowest or any Tender.

W. R. PARKER,
Town Clerk.

Municipal Buildings,
Heywood,
1st September, 1960.

BOROUGH OF WALLSEND.

COAST ROAD SEWER.

The COUNCIL invite TENDERS for the CONSTRUCTION of approx. 2,350 lin. yd. of 15in., 18in., 27in. and 30in. dia. CAST-IRON and CONCRETE PIPE SEWERS, together with the necessary Manholes, etc., and all appurtenant works.

Forms of Tender, Specification and Bills of Quantities may be obtained from the Council's Consulting Engineers, MESSRS. WATERHOUSE AND ROUNTHWAITE, M.M.Inst.C.E., 165 Westmoreland Road, Newcastle-upon-Tyne, 4, upon payment of a deposit of Five Guineas, which will be returned on receipt of a bona-fide Tender.

Drawings illustrating the work to be carried out may be inspected at the Offices of the Borough Surveyor, or at those of the Consulting Engineers.

Tenders should be delivered to me, the undersigned, in a plain sealed envelope endorsed "Coast Road Sewer," not later than 12 Noon on TUESDAY, the 11th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

JOHN STOKER,
Town Clerk.

Town Hall,
Wallsend.

CITY OF PLYMOUTH.

IMPROVEMENTS TO 206 DWELLINGS.

The COUNCIL is prepared to receive the names of firms interested in TENDERING for the SUPPLY of FORTIC TANKS, COPPER TUBE and Fittings, LAVATORY BASINS, TILED SURROUNDS, FLUE-SETS, FIRES, BATHS and SINKS.

Particulars can be obtained from the CITY ENGINEER, Guildhall, Plymouth, and Tenders are to be submitted by 9th SEPTEMBER, 1960.

HORNCHURCH URBAN DISTRICT COUNCIL.

- SUPPLY OF ROAD TRAFFIC SIGNS.
- ERECTION OF ROAD TRAFFIC SIGNS.

TENDERS are invited for the FOLLOWING:

- Supply and Delivery of approx. 140 Road Signs, Posts, Plastic Signing, etc.; and/or
- Erection of the Road Signs complete.

The Specifications and Bills of Quantities may be obtained from, and the Conditions of Contract inspected at, the Office of the Engineer and Surveyor, Council Offices, Billet Lane, Hornchurch, upon payment of a deposit of Two Guineas, which will be refunded in the case of a bona-fide Tender.

Tenders must state in their application whether documents in respect of (a) and/or (b) are required. The documents must be returned to the undersigned not later than Noon, MONDAY, the 19th September, 1960, and sealed in the envelope provided, which shall bear no indication of the person(s) tendering.

P. L. COX,
Clerk of the Council.

Council Offices,
Billet Lane,
Hornchurch,
Essex.

AMESBURY RURAL DISTRICT COUNCIL.

REGIONAL WATER SUPPLY—CONTRACT NO. 12.

AVON VALLEY MAINS.

TENDERS are invited from experienced public works contractors for the LAYING of approx. 4½ miles of 6in. dia. SPUN-IRON WATER MAINS, approx. 7 miles of smaller dia. MAINS, and incidental works.

Forms of Tender and Bills of Quantities may be obtained from the Council's Consulting Engineers, MESSRS. LEMON AND BLIZARD, Telford House, Hulse Road, Southampton, upon payment of a deposit of £3 3s., made out to the Rural District Council, which will be returned on the receipt of a bona-fide Tender and the return of all documents.

The Contract Drawings may be inspected at the Council Offices or at the Offices of the Consulting Engineers. On the form supplied, and priced Bills of Quantities, should be delivered to me, in a plain sealed envelope endorsed "Tender—Regional Water Supply—Contract No. 12," before Noon on WEDNESDAY, 28th September, 1960.

The Council do not bind itself to accept the lowest or any Tender.

E. M. NOTTAGE,
Clerk of the Council.

Redworth House,
Amesbury, Wilts.
26th August, 1960.

CONTRACTS

CARMARTHENSHIRE COUNTY COUNCIL.

PONTARULAIS-CROSS HANDS TRUNK ROAD, A.48.

IMPROVEMENT NORTH OF LLANNON ROAD JUNCTION.

TENDERS are invited for the EXCAVATION of approx. 7,700 cu. yd. of MATERIAL, CONSTRUCTION OF SURFACE WATER DRAINS, FENCING and OTHER GENERAL ROADWORKS at THREE SEPARATE SITES, near FFOREST, Pontardulais.

Contract documents can be obtained from, and Plans inspected at, the Office of the County Engineer and Surveyor, County Hall, Carmarthen, on payment of a deposit of £2, which is returnable on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders (with all documents), in a plain sealed envelope not bearing any name or mark indicating the sender, and endorsed "Roadworks at Fforest," must be returned to the undersigned not later than 15th SEPTEMBER, 1960.

The County Council does not bind itself to accept the lowest or any Tender.

W. S. THOMAS,
Clerk of the County Council.

County Hall,
Carmarthen,
August, 1960.

BOROUGH OF SOUTHALE.

STREET LIGHTING CONVERSION.

QUOTATIONS are invited, with a view to entering into a Contract with the Council, for the LIFTING, REMOVAL and DISPOSAL of 428 CAST-IRON GAS LAMP COLUMNS (average weight 4cwt. each), together with the Temporary Reinstatement involved in the above work.

Further details obtainable from the Borough Engineer and Surveyor, Town Hall, Southale, Middx. Quotations, in plain envelopes endorsed "Street Lighting Conversion," must be received by the undersigned not later than the 9th SEPTEMBER, 1960.

J. S. SYRETT,
Town Clerk.

7-9 South Road,
Southale, Middx.

BICESTER URBAN DISTRICT COUNCIL.

WATER MAIN.

FIXED-PRICE TENDERS are invited for the LAYING of approx. 6,900 lin. yd. of 9in. SPUN-IRON WATER MAIN and FITTINGS, in land along a route from UPPER HEYFORD to BICESTER, through the Parishes of Arley and Bucknell in the Ploughley R.D.C. area.

Plans, Specifications and Bills of Quantities may be seen at the Council Offices, and copies of Specifications and Bills of Quantities and Form of Tender may be obtained from GERALD CARLINS, ESQ., Surveyor, at the address below, on payment of a deposit of Two Guineas, refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of the documents.

Tenders, in plain sealed envelopes endorsed "9in. Water Main," to be delivered to the undersigned not later than 12 o'clock Noon on TUESDAY, 27th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. W. BAINTON,
Clerk of the Council.

Bicester Urban District Council,
The Garth,
Bicester, Oxon.
12th August, 1960.

ATHERSTONE RURAL DISTRICT COUNCIL.

TENDERS FOR DWELLINGS.

TENDERS are invited for the ERECTION of 24 HOUSES and TWO BUNGALOWS at WARTON.

Applications for copies of the Plans and Specification, accompanied by a deposit of £2 2s. (which will be refunded on receipt of a bona-fide Tender and the return of the Plans and documents), should be made to MESSRS. H. N. JEPSON AND PARTNERS, Chartered Architects, Midland Bank Chambers, Nuneaton.

Sealed Tenders, endorsed "Tenders for Dwellings," are to be delivered to me not later than First Post on MONDAY, 3rd October 1960.

The Council do not bind themselves to accept the lowest or any Tender, and contractors tendering do so at their own cost.

G. CARLTON MAY,
Clerk of the Council.

Council Offices,
Atherstone,
Warwickshire.

CHELMSFORD RURAL DISTRICT COUNCIL.

WATER MAINS.

TENDERS are invited for the PROVISION, LAYING and JOINTING of WATER MAINS, particulars of which are given in the Schedule hereto, together with incidental works. Tenders may be submitted in respect of one or more of the Water Mains.

Drawings, Specifications, Bills of Quantities and Forms of Tender may be obtained from the Council's Engineer and Surveyor, at the under-mentioned address, on payment of a deposit of One Guinea for each set of documents, which will be refunded on the receipt of a bona-fide Tender.

Tenders are invited on a Fixed-price Basis, and a Cost Variation Clause for Labour and Materials will not be included in the Contracts.

Tenders to be received by the undersigned, in a plain sealed envelope suitably endorsed, by not later than MONDAY, 19th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

THE SCHEDULE.

Particulars of Water Mains.

- (1) Approx. 300 lin. yd. of 3in. and 900 lin. yd. of 4in. Asbestos-cement Pressure Pipes at Meadgate Estate, Great Baddow (Phase II).
- (2) Approx. 400 lin. yd. of 3in. Asbestos-cement Pressure Pipes at Fir Tree Lane, Little Baddow.
- (3) Approx. 300 lin. yd. of 3in. Asbestos-cement Pressure Pipes at Romans Estate, Writtle.

C. A. BOHANNON,
Clerk of the Council.

Rural District Council Offices,
New London Road,
Chelmsford,
Essex.

CONTRACTS

COUNTY BOROUGH OF DUDLEY.

DEVELOPMENT OF PUBLIC OPEN SPACE,
WOLVERTON ROAD.

Applications to TENDER are invited for the ABOVE CONTRACT, consisting of 10,000 cu. yd. of Earthmoving, 2,500 sq. yd. of Bituminous Macadam Surfacing to Car Park, 5,000 sq. yd. of Cold Asphalt Surfacing to Footpaths and Playgrounds, Drainage, Fencing, and Installation of Playground Equipment. Applications must be submitted to the Borough Engineer, Council House, Dudley, Worcs., together with a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all documents.

The latest date for receipt of applications is Monday, 12th September, 1960, and Tender documents will be forwarded after this date for completing by MONDAY, 10th October, 1960.

P. D. WADSWORTH,
Town Clerk.

The Council House,
Dudley, Worcs.
22nd August, 1960.

MEXBOROUGH URBAN DISTRICT COUNCIL.

WATH ROAD SPORTS AND PLAYING GROUND
SCHEME, MEXBOROUGH.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION OF THE ABOVE GROUNDS, including Grading, Soiling and Seeding approx. 5 acres, and the Erection of Brick-built Pavilion, Shelter and Toilet Blocks; the Fixing of Playing Equipment, Fencing, etc., and all ancillary works. Plans and Articles of Agreement can be inspected, and General Conditions, Specifications, Bill of Quantities and Form of Tender obtained, at the Office of the Architect and Surveyor, Council Offices, Adwick Road, Mexborough, on payment of a deposit of Three Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and on the return of all documents issued to the contractor. Priced Bills of Quantities must be returned at the same time as the Tender, in the special envelope provided.

Tenders, endorsed "Wath Road Scheme," to be delivered in a plain sealed envelope to the undersigned not later than Noon on the 1st OCTOBER, 1960.

Tenders will only be considered from firms having had similar experience and who have adequate special plant and skilled staff.

The lowest or any Tender will not necessarily be accepted.

S. H. E. CRANE,
Clerk of the Council.

Council Offices,
Adwick Road,
Mexborough.
24th August, 1960.

BROMSGROVE URBAN DISTRICT COUNCIL.

CATSHILL SURFACE WATER RELIEF SCHEME.

The Council invite TENDERS for the ABOVE SCHEME. The work consists of the Construction on four sites of approx. 90 lin. yd. of Rectangular Culvert in Brick and 80 lin. yd. of 18in. dia. Concrete Tube Sewers, together with Headwalls, Spillways and all ancillary and incidental works.

Bills of Quantities and Specifications may be obtained from the Engineer and Surveyor, Council House, Bromsgrove, on a deposit of £2 2s. The deposits will be refunded on receipt of a bona-fide Tender and the return of all documents.

General Conditions of Contract and Drawings may be inspected at the above Office.

Tenders, in plain sealed envelopes, endorsed "Cats-hill Surface Water Relief Scheme," are to be delivered to the undersigned not later than SATURDAY, 24th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. A. JESSOP,
Clerk of the Council.

Council House,
Bromsgrove.
22nd August, 1960.

BROMSGROVE URBAN DISTRICT COUNCIL.

ROCK HILL, A.38, AND EDNAL LANE
IMPROVEMENT.

The Council invite TENDERS for the ABOVE WORKS. The approx. quantities are as follows:—

Rock Hill:
Kerbing, 1,100 lin. yd.
Tarmacadam Footpath, 2,410 sup. yd.
And ancillary works.

Ednal Lane:
Brick Wall, 65 sup. yd.
Kerbing, 65 lin. yd.
Tarmacadam Footpath, 65 sup. yd.
And ancillary works.

Bills of Quantities and Specifications may be obtained from the Engineer and Surveyor, Council House, Bromsgrove, on a deposit of £2 2s. The deposits will be refunded on receipt of a bona-fide Tender and the return of all documents.

General Conditions of Contract and Drawings may be inspected at the above Office.

Tenders, in plain sealed envelopes, endorsed "Rock Hill, A.38, and Ednal Lane Improvement," are to be delivered to the undersigned not later than SATURDAY, 24th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. A. JESSOP,
Clerk of the Council.

Council House,
Bromsgrove.
23rd August, 1960.

BELFAST HARBOUR.

RECONSTRUCTION OF OIL BERTHAGE
ACCOMMODATION IN MUSGRAVE CHANNEL,
BELFAST.

The Belfast Harbour Commissioners invite TENDERS for the RECONSTRUCTION OF OIL BERTHAGE ACCOMMODATION on the EAST SIDE OF MUSGRAVE CHANNEL, in accordance with the General Conditions of Contract, Specification and Drawings, which may be obtained on application to the Harbour Engineer at the Harbour Office, Belfast, 1.

Sealed Tenders should be addressed to the undersigned, endorsed "Tender for Oil Berthage," and delivered not later than 26th SEPTEMBER, 1960.

The Commissioners do not bind themselves to accept the lowest or any Tender.

F. W. P. HAMPTON,
General Manager and Secretary.

Harbour Office,
Belfast, 1.
24th August, 1960.

CONTRACTS

GLOUCESTERSHIRE COUNTY COUNCIL.

MORTON-OLDBURY NAITE ROAD.

TENDERS are invited for WORKS on the ABOVE-NAMED ROAD, and which consist of the Widening and Reconstruction of 2½ miles of Existing Road and the Construction of 1½ miles of New Road, including Drainage, Earthworks, Fencing, Footpaths, 18/22ft. wide Carriageway, Two Reinforced Concrete Culverts on Piled Foundations, and ancillary works.

The completion date is 1st September, 1961.

The works are situated between Morton and Oldbury Naite, and are approx. one mile north of Thornbury, near Bristol.

Tender documents can be obtained from the County Surveyor, Quay Street, Gloucester, on payment of a deposit of £10, made payable to the Gloucestershire County Council, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

"Morton-Oldbury Naite Road," must be received by the County Surveyor, Quay Street, Gloucester, not later than 10 a.m. on WEDNESDAY, 5th October 1960.

The Council does not bind itself to accept the lowest or any Tender.

GUY H. DAVIS,
Clerk of the County Council.

Shire Hall,
Gloucester.
August, 1960.

COUNTY BOROUGH OF HALIFAX.

WARLEY SURFACE WATER SEWER.

TENDERS are invited, on a Fixed-price Basis, for the CONSTRUCTION OF THE ABOVE WORKS, comprising approx. 530 lin. yd. of 18in. dia. Concrete Pipes, 130 lin. yd. of 15in. dia. Concrete Pipes and 330 lin. yd. of 12in. dia. Concrete Pipes. Details from the Borough Engineer, Crossley Street, Halifax, on receipt of Two Pounds deposit (cheques payable to Halifax Corporation), returnable on receipt of a bona-fide Tender delivered to the undersigned by FRIDAY, 16th September, 1960.

RICHARD de Z. HALL,
Town Clerk.

Town Hall,
Halifax.

BOROUGH OF LOWESTOFT.

HIGHWAYS ACT, 1959.

MAKING-UP OF CLOVER WAY (PART) FROM GUNTON ST. PETER'S AVENUE TO THE EASTERN EXTREMITY OF CLOVER WAY (BOUNDARY OF RAILWAY).

TENDERS are invited for the ABOVE WORK, comprising the FOLLOWING:
Making-up of approx. 2,000 super. yd. of Hard-core and Grave. Asphalt Carriageway, together with Concrete Flag Paving, Kerb, and Concrete Channel, and other ancillary works.

Drawings and Conditions of Contract will be available for inspection at the Borough Engineer's Office, 49 High Street, Lowestoft, and Form of Tender Specification and Bill of Quantities can be obtained from the Borough Engineer upon payment of a deposit of Two Guineas, which will be refunded upon the receipt of a bona-fide Tender not subsequently withdrawn, and the return of all documents.

Tenders must be delivered to the undersigned not later than 12 Noon on TUESDAY, 20th September, 1960. No Tender will be accepted unless in a sealed envelope endorsed "Tender—Making-up Clover Way, Lowestoft," and bearing no mark or writing by which the tenderer can be identified.

The Council do not bind themselves to accept the lowest or any Tender.

F. B. NUNNEY,
Town Clerk.

Town Hall,
Lowestoft.
24th August, 1960.

WHITCHURCH URBAN DISTRICT COUNCIL.

ERECTION OF 44 DWELLINGS.

SMALLBROOK HOUSING ESTATE.

FIXED-PRICE TENDERS are invited for the ERECTION OF THE FOLLOWING DWELLINGS:
One Block of Eight 1-bedroom Flats; Eight 2-bedroom Houses; 27 3-bedroom Houses;

Forms of Tender, Specification and Drawings may be obtained from the Council's Engineer and Surveyor at the address below, upon receipt of a cheque for Three Guineas made payable to Whitchurch Urban District Council, being a deposit which will be refunded subject to the receipt of a bona-fide Tender and the return of all Tender documents.

Tenders, in plain sealed envelopes endorsed "Smallbrook Housing," must be delivered to the Clerk of the Council, Paula Moss, Dodington, Whitchurch, Shropshire, not later than 12 Noon on SATURDAY, 1st October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

FRANK CLAYTON,
Clerk of the Council.

Paula Moss,
Dodington,
Whitchurch,
Shropshire.
24th August, 1960.

HUNTINGDON RURAL DISTRICT COUNCIL.

WATER MAINS AT BRAMPTON.

TENDERS are invited from suitably experienced contractors for the LAYING and JOINTING of approx. 500yd. of 4in. dia. ASBESTOS-CEMENT WATER MAINS with Screwed Joints, together with ancillary works, at Brampton.

Drawings may be seen during Office hours at the Offices of the Consulting Engineers, MESSRS. PICK, EVERARD, KEAY AND GIMSON, 6 Millston Lane, Leicester, from whom the Specification and Bill of Quantities may be obtained on payment of a deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender.

Tenders, on the loose form and in the envelope provided, should be delivered to the undersigned not later than 10 o'clock in the Forenoon of WEDNESDAY, the 21st September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. MIDWOOD,
Clerk of the Council.

Council Offices,
Montagu House,
Huntingdon.
24th August, 1960.

CONTRACTS

SCOTTISH HOME DEPARTMENT.

TRUNK ROAD, A.77.

RECONSTRUCTION OF BRIDGE OVER RAILWAY
AT WHITECRAIGS STATION.

The SECRETARY OF STATE invites TENDERS for the RECONSTRUCTION AND WIDENING OF A RAILWAY BRIDGE with Mass Concrete Abutments and a Steel Beam and Concrete Slab Deck.

Drawings for the proposed works may be inspected as from 1st September at the Offices of the Consulting Engineers, MESSRS. KYLE AND FREW, 9 Clairmont Gardens, Glasgow, C.3.

Contract documents may be obtained from the Consulting Engineers upon payment of a deposit of £5, made payable to the Order of the Queen's and Lord Treasurer's Remembrancer. The deposit will be refunded if a bona-fide Tender is submitted and not subsequently withdrawn.

Tenders, on the official form, which must be received before 4 p.m. on MONDAY, 26th September, 1960, should be sent in a sealed envelope marked "Tender for Whitecraigs Bridge," and addressed to the SECRETARY, Scottish Home Department, Broomhouse Drive, Saughton, Edinburgh, 11.

The Secretary of State does not bind himself to accept the lowest or any Tender.

ROYAL COUNTY OF BERKSHIRE.

RECONSTRUCTION OF BAY ROAD, BRACKNELL.

TENDERS are invited for the RECONSTRUCTION OF BAY ROAD, BRACKNELL, a length of 620 lin. yd. The scheme provides for approx. 1,800 cu. yd. of Excavation, Concrete Foundations, Gravel Asphalt Surfacing, Kerbing, Footways, Drainage and incidental works.

Drawings may be inspected at, and Conditions of Contract, Specification, Bills of Quantities and Form of Tender obtained from, the Office of the COUNTY SURVEYOR, Shire Hall, Reading, on payment of a deposit of £2 2s., returnable upon receipt of a bona-fide Tender, not subsequently withdrawn.

Tenders should be returned, in the envelope provided, not later than Noon on WEDNESDAY, 21st September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ROYAL COUNTY OF BERKSHIRE.

HIGHWAYS ACT, 1959 (PART 9)—CODE OF 1892.

TENDERS are invited for MAKING-UP ROCHDALE ROAD (Part), BRACKNELL. The works involved in this contract are as follows:—
790 sq. yd. of Hardcore.
790 sq. yd. of Bitumen Macadam.
260 lin. yd. of Kerb.
480 sq. yd. of Bitumen Macadam and Cold Asphalt Footways.

90 lin. yd. of Highway Drain and incidental works.

Drawings may be inspected at, and Specification, Bill of Quantities and Form of Tender obtained from, the Office of the COUNTY SURVEYOR, Shire Hall, Reading, on payment of a deposit of £2 (Two Pounds), which will be refunded on receipt of a bona-fide Tender, in envelope provided, must be returned not later than 12 Noon on FRIDAY, 16th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

STEPNEY METROPOLITAN BOROUGH COUNCIL.

RECONSTRUCTION OF SEWER IN
WHITECHAPEL ROAD.

TENDERS are invited for the ABOVE WORKS, comprising approx. 245yd. of 18in. dia. Sewer in trench, together with Manholes and ancillary works. Forms of Tender, with Conditions, etc., obtainable from the Borough Engineer and Surveyor, Nos. 227/233 Commercial Road, E.1, upon payment of a deposit of Two Guineas.

Closing date for Tenders, MONDAY, 19th September, 1960.

WILFRED REEVE,
Town Clerk.

Municipal Offices,
227/233 Commercial Road,
Stepney, E.1.

STEPNEY METROPOLITAN BOROUGH COUNCIL.

RECONSTRUCTION OF SEWER IN CABLE STREET.

TENDERS are invited for the ABOVE WORKS, comprising approx. 135yd. of 12in. dia. Sewer in heading, together with Manholes and ancillary works. Forms of Tender, with Conditions, etc., obtainable from the Borough Engineer and Surveyor, Nos. 227/233 Commercial Road, E.1, upon payment of a deposit of Two Guineas.

Closing date for Tenders, MONDAY, 19th September, 1960.

Municipal Offices,
227/233 Commercial Road,
Stepney, E.1.

WILFRED REEVE,
Town Clerk.

BOROUGH OF TAUNTON.

TENDERS are invited, by 19th SEPTEMBER at 10 a.m., for the CONSTRUCTION OF A TARMACADAM CAR PARK at CANON STREET, approx. 3,500 sq. yd., and ancillary works.

Specification, Bill of Quantities and Form of Tender obtainable from Borough Engineer, St. Paul's House, Taunton.

K. A. HORNE,
Town Clerk.

BOROUGH OF LYMINGTON.

PRIVATE STREET WORKS ACT, 1892.

SEACROFT AVENUE GROUP.

TENDERS are invited for MAKING-UP SEACROFT AVENUE, PINECLOSE and SEAFIELD CLOSE, within the Borough of Lympington.

Plans and Conditions of Contract may be inspected at the Office of the Borough Engineer, Town Hall, Lympington, from whom copies of the Specification, Bills of Quantities and Form of Tender may be obtained on payment of a sum of £2 2s., which is returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, accompanied by priced Bills of Quantities, in plain sealed envelopes endorsed "P.S.W.—Seacroft Avenue Group," must be delivered to the undersigned not later than First Post on MONDAY, 3rd October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

A. L. SLATER,
Town Clerk.

Town Hall,
Lympington.

CONTRACTS

BOROUGH OF KEIGHLEY.

LABURNUM GROVE PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of LABURNUM GROVE, approx. 250yd. in length, with SURFACE DRESSED LIMESTONE CARRIAGEWAY, MACADAMISED FOOTPATHS, and 9in. dia. SURFACE WATER SEWER.

Drawings and General Conditions of Contract may be seen at the Borough Engineer's Office, College Street, Keighley, during normal office hours. Specification and Bill of Quantities, which must be returned fully priced with the Form of Tender, will be forwarded on application to the Borough Engineer. Sealed Tenders, on the official forms and in the envelopes provided for the purpose and endorsed "Laburnum Grove P.S.W.," must be delivered to the undersigned not later than 10 a.m. on THURSDAY, 15th September, 1960.

H. W. SMITH,
Town Clerk.

Town Hall,
Keighley.

CITY OF SHEFFIELD.

TENDERS are invited for the DEMOLITION of PREMISES situated at MOORHEAD, Sheffield, and formerly occupied by Messrs. Roberts Bros. (Sheffield), Ltd.

The Form of Tender, Conditions of Contract, Specification, Plan, and full details of the work to be carried out may be obtained from the Estates Surveyor, Town Hall, Sheffield, 1, on payment of a deposit of Two Guineas. Cheques to be made payable to the order of the Sheffield City Council. Deposits will be refunded on receipt of bona-fide Tenders not subsequently withdrawn.

Tenders must be received by the undersigned, to reach the undersigned not later than 9 a.m. on TUESDAY, the 13th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

JOHN HEYS,
Town Clerk.

Town Hall,
Sheffield.

URBAN DISTRICT COUNCIL OF ROYSTON.

CONSTRUCTION OF BUS STATION, SHELTER AND CONVENIENCES.

TENDERS are invited for the FOLLOWING:—

- (1) The Laying out and Construction of approx. 1,200 sq. yd. of Hardstanding and ancillary works in the vicinity of Bus Station at Barkway Street, Royston, but excluding surfacing of the area.
- (2) The Construction of a Waiting Room and Shelter and Public Conveniences on the site.

Tenders may be submitted for both or either of the works.

Bills of Quantities, Specifications and Forms of Tender may be obtained from and Plans and General Conditions of Contract inspected at, the Office of the Surveyor, Town Hall, Royston.

Tenders, in plain sealed envelopes, endorsed "Bus Station," must be delivered to the undersigned not later than FRIDAY, 9th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. J. WALKER,
Clerk of the Council.

Town Hall,
Royston, Herts.

23rd August, 1960.

THE URBAN DISTRICT COUNCIL OF HAVANT AND WATERLOO.

The above Council invite FIXED-PRICE TENDERS for the CONSTRUCTION of approx. 340 lin. yd. of 15in. dia. FOUL WATER SEWER, and ancillary works connected therewith at FISHERY LANE, Havling Island.

Conditions of Contract and Drawings may be inspected at the Office of the Engineer and Surveyor, 1 Park Road North, Havant, from whom Specifications, Bills of Quantity and Form of Tender may be obtained.

No Tender will be received except in a plain sealed envelope which must bear the word "Tender," followed by the subject to which it relates, but shall not bear any name or mark indicating the sender.

Tenders must be delivered to the CLERK OF THE COUNCIL, Town Hall, Havant, not later than 12 Noon on THURSDAY, 15th September, 1960.

The Council do not bind themselves to accept the lowest of any Tender.

THE URBAN DISTRICT COUNCIL OF HAVANT AND WATERLOO.

The above Council invite TENDERS for the STAGE 1 IMPROVEMENT OF HAMBLEDON ROAD, Waterloo (B.2150), from Milton Rd. eastwards for a distance of 650yd., comprising the Provision of: 260 lin. yd. of 9in. dia. Surface Water Sewer; 80 lin. yd. of 12in. dia. Surface Water Sewer; 1,300 sq. yd. of 8in. Reinforced Concrete Haunch; 650 lin. yd. of Precast Concrete Channel; 3,900 sq. yd. of 1 1/2in. Hot Rolled Asphalt; 1,300 sq. yd. of 1in. Hot Rolled Asphalt in Footway Surfacing, and ancillary works.

Conditions of Contract and Drawings may be inspected at the Office of the Engineer and Surveyor, 1 Park Road North, Havant, from whom the Specification, Bills of Quantities and Form of Tender may be obtained.

No Tender will be received except in a plain sealed envelope which must bear the word "Tender," followed by the subject to which it relates, but shall not bear any name or mark indicating the sender.

Tenders must be delivered to the CLERK OF THE COUNCIL, Town Hall, Havant, not later than 12 Noon on THURSDAY, 15th September, 1960.

The Council do not bind themselves to accept the lowest of any Tender.

DURSLEY RURAL DISTRICT COUNCIL.

WATER MAIN EXTENSION TO NEW ROAD, NORTH NIBLEY.

TENDERS are invited for the LAYING OF approx. 630yd. of 3in. ASBESTOS-CEMENT CLASS "C" PIPES and 80yd. of 1 1/2in. GALVANISED STEEL TUBE, together with Valves and Hydrants.

Drawings, Specification, Bill of Quantities and Form of Tender may be obtained from the Office of MR. H. J. DIMERY, the Council's Engineer and Surveyor, on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender and all tendering documents.

Tenders should be submitted to the undersigned not later than MONDAY, the 15th September, 1960, in the appropriately endorsed envelopes, which will be supplied by the Council with the Tender documents.

Dated this 25th day of August, 1960, at the Council Offices, Kingshill, Dursley.

H. A. PATE,
Clerk of the Council.

CONTRACTS

DERBYSHIRE COUNTY COUNCIL.

BLACKSMITH LANE, CALOW (CLASS III), NEAR CHESTERFIELD.

WIDENING AND REALIGNMENT.

TENDERS are invited for IMPROVEMENT WORKS on the ABOVE ROAD (length approx. 500 lin. yd.), comprising Site Clearance, Earthworks, Drainage, Widening and Regrading of the Existing Carriageway, and other ancillary works.

Plans, etc., may be seen, and Form of Tender obtained from the County Surveyor, County Offices, Matlock, on payment of Two Pounds deposit, cheques payable to Derbyshire County Council. Deposit will be refunded on signing contract or notification of non-acceptance.

Tenders, in plain sealed envelope endorsed "Blacksmith Lane Impt. (B. and H.)," to be delivered to the Clerk of the County Council, County Offices, Matlock, Derbyshire, by WEDNESDAY, 14th September, 1960.

The Council do not bind itself to accept the lowest or any Tender.

S. MEHEW,
County Surveyor.

County Offices,
Matlock.

BOROUGH OF POOLE.

HERBERT AVENUE RECONSTRUCTION.

The COUNCIL invite TENDERS for the RECONSTRUCTION OF HERBERT AVENUE AND WORKS OF SURFACE WATER DRAINAGE. The length of the road is approx. 1 1/4 miles.

Contract documents from Borough Engineer, Two Guineas deposit.

Tenders to me by Noon, 19th September, 1960.

Tender not subsequently withdrawn.

J. G. HILLIER,
Town Clerk.

Municipal Buildings,
Poole, Dorset.
August, 1960.

ORPINGTON URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS.

ST. AUBYNS CLOSE AND ST. AUBYNS GARDENS, ORPINGTON.

TENDERS are invited for the MAKING-UP of the ABOVE STREETS: the lengths involved are: (1) St. Aubyns Close—73 lin. yd.; (2) St. Aubyns Gardens—186 lin. yd.

The works consist of Providing and Laying Hardcore Foundations, Tarmacadam Surfacing, Slabbed Paved Footways, Kerbing, and other incidental works.

The Conditions of Contract and Drawings may be inspected at the Office of, and Bills of Quantities obtained on application to, the undersigned upon payment of £2 deposit in respect of each street, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in the envelope provided, must be received by the Clerk of the Council, Council Offices, Crofton Road, Orpington, not later than Noon on 26th SEPTEMBER, 1960.

The Council do not bind itself to accept the lowest or any Tender.

L. W. FREEMAN,
Engineer and Surveyor.

Civic Offices,
The Walnuts,
High Street,
Orpington, Kent.

WYCOMBE RURAL DISTRICT COUNCIL.

TYLERS GREEN, HAZLEMERE, PENN AND HOLMER GREEN SEWERAGE SCHEME.

TENDERS are invited for the LAYING OF approx. 34,000 lin. yd. of 4in., 6in., 8in., 12in., 15in. and 18in. dia. CONCRETE STONEWARE, PITCH FIBRE AND SPUN-IRON SEWERS; 2,000 lin. yd. of 12in. SPUN-IRON PIPING MAINS, and the CONSTRUCTION OF 420 CONCRETE MANHOLES, TWO PUMPING STATIONS, together with Road Reinstatement and other ancillary works.

Copies of the Tender documents may be obtained from K. E. M. DANIELS, A.M.I.C.E., M.I.Mun.E., A.R.I.C.S., Engineer and Surveyor, 9/9 Easton Street, High Wycombe, and the General Conditions and Drawings may be inspected at his office during normal working hours.

Tenders will only be considered from contractors experienced in works of a similar nature and magnitude.

Tenders, in the envelopes provided, and endorsed "Tyters Green, Hazlemere, Penn and Holmer Green Sewerage," must be delivered to the undersigned not later than First Post on SATURDAY, 1st October, 1960.

L. C. RYSDALE,
Clerk of the Council.

Council Offices,
17 High Street,
High Wycombe.

BUCKS. WATER BOARD.

MAINLAYING AND MAINS MAINTENANCE.

The Bucks. Water Board will shortly be inviting TENDERS from contractors with experience in the LAYING AND REPAIR OF SPUN-IRON, STEEL AND ASBESTOS-CEMENT WATER MAINS in all sizes from 3in. to 24in. dia.

The Contract, which will be for a period of three years, will include works in all parts of the Board's area. In addition to the lengths of main of varying sizes which are included, there will be a regular and continuous amount of maintenance work at daywork rates, and it is expected that the total value for the three years will approximate to £125,000. It will be a condition of the Contract that the successful contractor will be required to set up a depot and establish an organisation within the Board's area in order to efficiently administer the Contract.

The Board invite applications from contractors with a view to the selection of a limited number of firms to be invited to tender.

Applications must be accompanied by full details of at least two previous works, with the names of the authorities and engineers responsible, to whom reference may be made. Applications should be sent to the undersigned, in a sealed envelope endorsed "Mainlaying and Maintenance of Mains," so as to be received not later than Noon on 16th SEPTEMBER, 1960.

The Board will exercise their discretion as to whom they invite to tender, and do not undertake to include any firm making application.

H. A. FOLEY,
Clerk of the Board.

7 Temple Square,
Aylesbury.
August, 1960.

CONTRACTS

COUNTY BOROUGH OF BOLTON.

TENDERS are invited for the CONSTRUCTION of STREET AND SEWERING WORKS in SMITHILLS DISTRICT, viz.: Seaton Road, Trawden Avenue, Lawson Road, Knowles Edge Street and Back Bennett's Lane.

Specifications, etc., obtainable from the BOROUGH ENGINEER AND SURVEYOR, Town Hall, Bolton, to whom Tenders should be forwarded by 10 a.m. on the 16th SEPTEMBER, 1960.

BOROUGH OF CHINGFORD.

(1) CHINGFORD MOUNT ROAD (SINCLAIR ROAD/HAMPTON ROAD) RESURFACING.

(2) SEWARDSTONE ROAD (MERRYHILL CLOSE/KINGS HEAD HILL) RECONSTRUCTION.

TENDERS are invited for the EXECUTION OF ONE or BOTH of the ABOVE WORKS, comprising the FOLLOWING:

- (1) The Removal of Asphalt Surfacing and Laying New Rolled Asphalt Surfacing, Re-laying Kerb, and incidental Footpath and Drainage Work;
- (2) The Breaking-out of Existing Carriageway and Re-laying in Reinforced Concrete, Kerbing and Construction of Footway, and incidental work.

Form of Tender, Bills of Quantities, etc., may be obtained, and Drawings inspected, on application to the Borough Engineer, Town Hall, E.4, upon payment of a deposit of £2 2s. for each work, returnable in receipt of a bona-fide Tender only.

Sealed Tenders, in the envelopes provided, which shall not bear any mark indicating the sender, are to be delivered to me not later than 12 Noon on WEDNESDAY, 21st September, 1960, and Tenders received after this time will not be considered.

The Council do not bind itself to accept the lowest or any Tender.

CLIVE DENNIS,
Town Clerk.

Town Hall,
Chingford, E.4.

CITY OF MANCHESTER.

TENDERS invited for the SUPPLY, DELIVERY AND ERECTION OF FIRE HYDRANTS AND MAINS at LANGHO COLONY, near Blackburn.

Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall.

Tenders returnable by 23rd SEPTEMBER.

CITY OF MANCHESTER.

TENDERS invited for the DESIGN, SUPPLY AND DELIVERY OF PRECAST CONCRETE FLOOR UNITS for incorporation in the Thermagard System of Construction, to HARPUHEY TECHNICAL HIGH SCHOOL.

Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall.

Tenders returnable by 16th SEPTEMBER.

CITY OF MANCHESTER.

PROPOSED CITY ABATTOIR.

Builders and public works contractors are invited to submit their names for consideration by the Markets Committee in preparing a select list of contractors to TENDER for the PROPOSED NEW CITY ABATTOIR.

The Abattoir is estimated to cost about £2m., and comprises Laying, Killing and Cold Store Blocks, Meat Market, Restaurant, Administration and Shop Blocks, mainly in Reinforced Concrete Construction, with General Site Development, Railway Sidings and Platforms. The site area is approx. 2 1/2 acres, situate at Phillips Park, Manchester.

Tenders will be invited on Bills of Quantities, which should be available in December of this year.

The work programme is planned to commence in March, 1961, and be completed by December, 1962.

Replies to this advertisement, addressed to the CITY ARCHITECT, Town Hall, Manchester, should be made by not later than 10 a.m. on WEDNESDAY, 14th September. Contractors should give full particulars of their organisation, including details of plant and labour resources, whether they can undertake to complete the works within the planned period; and quote examples of previous contracts of similar magnitude which they have successfully undertaken.

EGHAM URBAN DISTRICT COUNCIL.

WIDENING OF CHRISTCHURCH ROAD, VIRGINIA WATER.

TENDERS are invited for the REALIGNMENT AND WIDENING OF PART OF CHRISTCHURCH ROAD, Virginia Water, over an approx. length of 850yd. The work will consist of Kerbing, Concrete Haunching, Surface Water Drainage, and ancillary works.

Plans may be inspected at the Office of the Engineer and Surveyor, Fire Station Buildings, 20 High Street, Egham, where Contract documents may also be obtained.

Tenders are to be returned to the undersigned, in the envelope provided, not later than SATURDAY, 24th September, 1960.

The Council do not bind itself to accept the lowest or any Tender.

H. R. H. SMITH,
Clerk of the Council.

Council Offices,
155 High Street,
Egham, Surrey.

THE RURAL DISTRICT COUNCIL OF TRURO.

MYLOR BRIDGE SEWERAGE SCHEME.

TENDERS are invited from experienced contractors for the CONSTRUCTION OF approx. 5,300 lin. yd. of 9in., 6in. and 5in. SPUN-IRON and SALT GLAZED WARE SEWERS, together with the Construction of all necessary Manholes. The Contract includes the Construction of a Sewage Pumping Station and a Sewage Treatment Works.

Plans, General Conditions of Contract, Specifications and Bills of Quantities together with Instructions to Tenderers, may be obtained from the Council's Consulting Engineers, MESSRS. OSMAND AND LANE, Tremper Lodge, Tremper Bridge, Newquay, to whom all inquiries with regard to the above Contract should be addressed.

Applications for Tender documents should be accompanied by a deposit of £5 5s. made payable to the Truro Rural District Council. This deposit will be refunded upon the submission of a bona-fide Tender and on the return complete to the Council of all requisite Plans and Contract documents.

Tenders, with the envelope endorsed "Contract T.37.D.," should be sent to the undersigned to arrive not later than WEDNESDAY, 28th September, 1960.

R. W. BARRATT,
Clerk of the Council.

Rural Council Hall,
River Street,
Truro,
29th August, 1960.

CONTRACTS

KENT COUNTY COUNCIL.

The above Council invites TENDERS for the SUPPLY and ERECTION of Four 35ft. high STEEL LIGHTING COLUMNS, together with the SUPPLY and FITTING of Four 200-W SODIUM DISCHARGE LANTERNS, and Auxiliary Electrical Equipment, at the BOSTAL HILL ROUNDABOUT, THANET WAY, Whitstable.

Forms of Tender can be obtained from the COUNTY SURVEYOR, County Hall, Maidstone, on payment of a deposit of £2, which will be returned on receipt of a bona-fide Tender.

LANCASHIRE COUNTY COUNCIL.

The Lancashire County Council invite TENDERS for the SUPPLY of the FOLLOWING MATERIALS:—

- (1) Aggregate for Concrete.
- (2) Ashes (Fine and Rough).
- (3) Castings—Manhole Covers, Gully Grates, etc.
- (4) Cement.
- (5) Chippings—Precoated Granite and Dry Limestone and Granite.
- (6) Concrete—Ready Mixed.
- (7) Hot Rolled Asphalt.
- (8) Kerbs, Flags, etc.—Hydraulically Pressed.
- (9) Laying of Plastic White Lines and Reflector Studs.
- (10) Petrol and Derv.
- (11) Pipes, etc.—Earthenware.
- (12) Plastic White Line Material.
- (13) Sand for Concrete, Building and Gritting.
- (14) Tar and Tar Compounds and Bitumen.
- (15) Tar and Bitumen Macadam, etc., and Cold Asphalt.
- (16) Traffic Signs.
- (17) Tools (Shovels, Picks, etc.).

Contractors who desire Forms of Tender (to be forwarded when available) should make application to the COUNTY SURVEYOR, County Hall, Preston (P.O. Box 9), not later than 30th SEPTEMBER, 1960, quoting Ref. 148/51.

COUNTY BOROUGH OF BOOTLE.

BOROUGH ENGINEER'S DEPARTMENT.

TENDERS are invited for RESURFACING approx. 15,890 sq. yd. of AINTREE ROAD and MARSH LANE with TWO-COURSE HOT ROLLED ASPHALT. Tender documents are obtainable from the Borough Engineer and should be returned to the undersigned by 10 a.m. on SATURDAY, 17th September, 1960.

HAROLD PARTINGTON,
Town Clerk.

Town Hall,
Bootle 20,
Lancs.

BOROUGH OF CROSBY.

HOT ROLLED ASPHALT SURFACING.

TENDERS are invited for the HOT ROLLED ASPHALT CARPETING OF CROSBY ROAD NORTH, COLLEGE ROAD, MANOR ROAD and the NORTH-ERN ROAD, totalling approx. 16,000 sq. yd., together with approx. 3,000 sq. yd. of SAND CARPET in THE SERPENTINE and SERPENTINE NORTH.

Copies of Specification, Bill of Quantities and Form of Tender may be obtained on application to the Borough Engineer and Surveyor at the address below on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn. Drawings of the work may be inspected at Borough Engineer's Office.

Sealed Tenders, marked "H.R.A. Contract," to be delivered to the undersigned not later than Noon on 16th SEPTEMBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

HAROLD O. ROBERTS,
Town Clerk.

Town Hall,
Waterloo,
Liverpool, 22.

BOROUGH OF REIGATE.

TWO BLOCKS OF 12 MAISONNETTES WITH 36 STORES UNDER AND FOUR GARAGES—CROMWELL ROAD ESTATE, REDHILL.

FIXED-PRICE TENDERS invited, based upon Bills of Quantities for Substructure and Site Works, and Lump Sum for Superstructure.

Form of Tender, Specification, Bills of Quantities and Plans obtainable from Borough Surveyor, Town Hall, Reigate, on payment of deposit of £2 2s. Closing date for receipt of Tenders: Noon, 27th SEPTEMBER, 1960.

HEBER DAVIES,
Town Clerk.

Town Hall,
Reigate.

CHERTSEY URBAN DISTRICT COUNCIL.

CONTRACT 68.—24 4-STOREY MAISONNETTES, 12 O.P. BUNGALOWS, 22 GARAGES.

FAIROAKS, LIBERTY LANE, ADDESTONE.

TENDERS are invited for this Contract of 36 Dwellings, 22 Garages and Site Works including Demolition, Access Road and Services.

Application for Tender documents, together with a deposit of Two Guineas, to the Engineer and Surveyor, The Orchard, Staines Lane, Chertsey, Surrey, before FRIDAY, 9th September, 1960.

A. REX HERBERT,
Clerk of the Council.

Council Offices,
Chertsey,
Surrey.

ROCHFORD RURAL DISTRICT COUNCIL.

TENDERS are invited for the SUPPLY/ERECTION of CHILDREN'S PLAYGROUND EQUIPMENT on the Council's Open Spaces at PLAYSTALLS, BARLING MAGNA and ROCHFORD GARDEN ESTATE, Rochford.

The Conditions of Contract may be inspected, and copies of the Form of Tender and Specification may be obtained from the Engineer and Surveyor at these Offices on payment of a deposit of One Pound, which will be refunded upon receipt of a bona-fide Tender, together with the return of all documents.

Sealed Tenders, addressed to the undersigned and endorsed "Tender for Playground Equipment," are to be received not later than 12 Noon on 22nd SEPTEMBER, 1960.

No Tender will be received except in the special envelope provided, which shall not bear any name or mark indicating the sender.

The Council do not bind themselves to accept the lowest or any Tender.

S. C. HARRIS,
Clerk of the Council.

Council Offices,
Rochford, Essex.
19th August, 1960.

CONTRACTS

BUCKS. COUNTY COUNCIL.

AMERSHAM-CHESHAM ROAD, A.416.

ROADWORKS—STATION ROAD, AMERSHAM.

TENDERS are invited for ROADWORKS (approx. 150 yd.), comprising Lowering, Widening, Strengthening, and Minor Realignment with Lean Rolled Concrete, Tarmacadam, Shaping, Kerbing, Channelling, Drainage, Footpath, and ancillary works.

Drawings may be seen at the Offices of the County Surveyor, County Offices, Aylesbury, or at the Offices of the Divisional Surveyor, Bishops House, Reynolds Road, Beaconsfield.

Contract documents may be obtained from the County Surveyor on payment of a deposit of £2, returnable on receipt of a bona-fide Tender.

Tenders must be received by me by 10 a.m. MONDAY, 26th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the County Council.

County Hall,
Aylesbury.
August, 1960.

BEDFORDSHIRE COUNTY COUNCIL.

IPSWICH-WEEDON TRUNK ROAD, A.428.

IMPROVEMENT FROM STAGADEN SIDE GATE TO BROMHAM WATER TOWER.

TENDERS are invited for PROVIDING and LAYING GRAVEL ASPHALT as Regulating and Base Course and GRANITE ASPHALT SURFACING MATERIAL.

Applications for the necessary documents should be addressed to the County Surveyor, Dents Road, Bedford, and should be accompanied by a deposit of Two Guineas, which will be returned on the receipt of a bona-fide Tender.

Completed Tenders in the endorsed envelope provided, must be delivered to the undersigned on or before FRIDAY, 16th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

GEORGE BREWIS,
Clerk of the County Council.

Shire Hall,
Bedford.

BASILDON URBAN DISTRICT COUNCIL.

GRANGE ROAD HOUSING SITE—FOOTWAYS AND VERGES.

TENDERS will shortly be invited for the CONSTRUCTION of approx. 2,200 sq. yd. of TARMACADAM FOOTWAYS, together with appurtenant works.

Experienced contractors wishing to tender should apply to the Council's ENGINEER AND SURVEYOR, Key House, 88 Town Square, Basildon, Essex, by 9th SEPTEMBER, 1960.

The application for the above should be accompanied by a deposit of £2 2s. (Two Guineas), which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of all documents.

The Council does not bind itself to accept the lowest or any Tender.

NEATH RURAL DISTRICT COUNCIL.

ROAD A.483—JERSEY MARINE.

TENDERS are invited for the SUPPLY and ERECTION of 47 DOUBLE-ARM and THREE SINGLE-ARM COLUMNS, and 97 200-W SODIUM LAMPS, together with auxiliary Gear and Wiring.

Also the Supply and Laying of Two-core 0.0225 and 0.04 CABLE, together with a Short length of 0.05 CABLE. Approx. total length 2,631 yd.

General Conditions of Contract, Specification and Bill of Quantities may be obtained from, and Plans inspected at, the Engineer and Surveyor's Department, 18 Orchard Street, Neath, on payment of £3 3s., which will be refunded on receipt of a bona-fide Tender.

Tenders in plain sealed envelopes endorsed "Tender—Road A.483 Lighting," must be sent to the undersigned not later than the First Post, TUESDAY, 20th September, 1960.

(Signed) I. H. K. THORNE,
Clerk to the Council.

Orchard Chambers,
Orchard Street,
Neath.
26th August, 1960.

METROPOLITAN WATER BOARD.

The Board are preparing lists of firms able and willing from time to time to TENDER for the EXECUTION of the UNDERMENTIONED WORK or the SUPPLY of ANY of the GOODS or ARTICLES and SERVICES respectively indicated BELOW. Persons and firms desirous of having their names included in these lists are invited to apply to the undersigned for the requisite form:

- Asbestos and Pitch Fibre Pipes.
- Boreholes, Wells and Headings, Construction of.
- Cranes (Overhead, Runway, Mobile).
- Chimney Shafts, Inspection and Repair of.
- Civil Engineering Work (Buildings, Demolition, Mainlaying, Roads and Drainage, Service Reservoirs and Contact Tanks, Storage Reservoirs, Tunnel Mains, Waterproofing Service Reservoirs, etc.).
- Civil Engineering Plant: Provision or Hire.
- Cocooning of Plant.
- Concrete Products, all types.
- Expansion Jointing and Sealing Compounds, Asphalt, etc.
- Fencing, Supply and/or Supply and Erection (Prestressed, Concrete Palisade, Concrete Post and Chain Link, Concrete Post and Cattle Wire).
- Firebricks and Fireclay.
- Glazing.
- Grouting and Grout Equipment.
- Photo Prints.
- Protective and Uniform Clothing: Provision or Cleaning.
- Pumping Installations, Complete.
- Reinforcement.
- Roadmaking Materials.
- Sand, Ballast and Soil.
- Steel Tubes and Specials.
- Signs and Nameplates, Metal, etc.
- Soot Blowers.
- Tanks, Drums, Cisterns and Allied Products.
- Taraulins.
- Valves, all types, and Accessories.

All persons and firms will be notified of the result of their application to be placed on the lists.

S. D. ASKEW,
Clerk of the Board.

Offices of the Board,
New River Head,
Rosebery Avenue,
London, E.C.1.

CONTRACTS

CITY OF YORK.

HOUSING COMMITTEE.

DEMOLITION OF PROPERTIES.

TENDERS are invited for the DEMOLITION of 157 PROPERTIES in PERCY STREET, WHITBY TERRACE, WALMGATE, BISHOPHILL JUNIOR, GEORGE STREET, TRINITY LANE and ELDON STREET.

The General Conditions of Contract and Drawings may be inspected at, and the Specification, Bill of Quantities and Form of Tender obtained from the Office of the undersigned on deposit of £1 (cheque to be crossed and made payable to York Corporation), which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

The completed Form of Tender shall be delivered to the undersigned, in the official envelope provided, endorsed "Derelict Properties Demolition," not later than Noon on MONDAY, 19th September, 1960.

The lowest or any Tender will not necessarily be accepted.

CHAS. J. MINTER,
City Engineer, Surveyor and
Planning Officer.

7 St. Leonard's Place,
York.

CREDITON URBAN DISTRICT COUNCIL.

ERECTION OF SIX ONE-BEDROOM FLATS—CHURCH STREET, CREDITON.

Applications are invited from contractors wishing to TENDER for the CONSTRUCTION of SIX ONE-BEDROOM FLATS at Church Street, Crediton. Applications are to be made to the Council's Architects, MESSRS. F. W. BEECH AND E. CURNOW COOKE, F.L.R.I.B.A., 15 Dix's Field, Exeter, and are to be accompanied by a deposit of Three Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn. Cheques are to be made payable to the Crediton Urban District Council.

Specifications and Bill of Quantities. Plans and Form of Tender will be issued by the Architects, and Tenders are to be endorsed "Church Street Flats" and to be received by the undersigned not later than Noon on MONDAY, 26th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. H. KING ROBINSON,
Clerk.

Manor Office,
Crediton.
25th August, 1960.

LITTLEPORT PARISH COUNCIL.

PROPOSED SWIMMING POOL—PARSON'S LANE, LITTLEPORT, CAMBS.

TENDERS are invited for the CONSTRUCTION of a SWIMMING POOL, including Filtration and Chlorination Plant, Cubicles, Conveniences, etc. Plans can be inspected, and Bills of Quantities, Specifications and Tender Forms can be obtained from the Architect, MR. A. E. KING, M.Inst.R.A., 1a Lynn Road, Ely, Cambs.

Tenders on the prescribed Tender Form, endorsed "Tender for Swimming Pool," to be received by the undersigned on or before 8th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. SPARROW,
Clerk to the Council.

Town Hall,
Littleport,
Ely, Cambs.

For Contracts received too late for
classification see page 1033

APPOINTMENTS VACANT

BRITISH GUIANA.

PUBLIC WORKS DEPARTMENT.

CIVIL ENGINEERS.

Qualifications: Candidates should have either a University degree, or equivalent, recognised by the Institution of Civil Engineers, plus two years' practical experience; or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers, and have had not less than five years' approved practical experience. Candidates should have experience in handling work by direct labour and by contract.

Duties: Responsibility for a District, including construction and maintenance of sea and river defences, building of roads, construction of buildings, and the control of staff. May also be required to take charge of a large building project and to assist on large road construction or sea defence projects.

Terms of Appointment: On contract for one hour of three years in the first instance, with substantial gratuity.

Emoluments: In Scale £1,100-£1,400 p.a.

Free passages. Generous leave.
Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD112/30/05/D14.

COUNTY BOROUGH OF DERBY.

WATER DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS on the PERMANENT STAFF of the WATER UNDERTAKING:

(a) Engineering Assistant—Salary Grades A.P.T. I and II (£610-£880 p.a.), according to qualifications and experience. Applicants should be capable of carrying out surveys and be competent draughtsmen.

(b) Technical Assistant—Salary Grade A.P.T. I (£610-£765). Applicants should be competent draughtsmen, and preference would be given to those having some waterworks experience.

The posts are superannuable and subject to the passing of a medical examination and to N.I.C. Conditions of Service.

Applicants should state age, training, present and past appointments, and such qualifications as are held, and should quote the names and addresses of two referees.

The Council cannot provide housing accommodation.

Applications should be submitted to the Water Engineer, 1 Tenant Street, Derby, not later than the 12th SEPTEMBER, 1960.

N. S. FISHER,
Town Clerk.

APPOINTMENTS VACANT

LONDON COUNTY COUNCIL.
BRIXTON SCHOOL OF BUILDING.

REQUIRED, September, 1960, ASSISTANT, Grade 8, to teach civil and structural engineering subjects in sandwich and part-time courses. Should be Graduate in Civil Engineering and Corporate Member of an appropriate Institution. Teaching and/or industrial experience desirable. Experience in hydraulics or organisation of laboratories a recommendation.

Burnham (F.E.) salary scale (£700 x £27 10s—£1,150) plus London allowance and additions for training and qualifications. Increments within scale for experience.

Application Forms (foolscap s.a.e.) from SECRETARY at the School, Fernside Road, S.W.4. Closing date: 16th SEPTEMBER.

Please quote F33A/CJ/2242/9.

LONDON COUNTY COUNCIL.
HOUSING MANAGEMENT DEPARTMENT—WORKS DIVISION.

BONUS SURVEYORS REQUIRED for operation of incentive schemes for all trades on work of new construction, and modernisation and conversion schemes.

Salary, according to experience and qualifications, up to a maximum of £950 p.a.

Apply in writing not later than 14th SEPTEMBER, stating age, qualifications and experience, to DIRECTOR OF HOUSING (G/CJ/2223/9), County Hall, S.E.1.

COUNTY BOROUGH OF DONCASTER.

APPOINTMENT OF BUILDING INSPECTOR.

APPLICATIONS are invited for the POST of BUILDING INSPECTOR at a salary in accordance with Grade A.P.T. III (£880-£1,065 p.a.).

Candidates should have experience in similar capacities and should have a good knowledge of Building By-laws and Town Planning procedure. Preference will be given to applicants holding the Building Inspector's Certificate of the Institution of Municipal Engineers.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and the passing of a medical examination.

Applications, stating age, education, qualifications, experience, past and present appointments, and giving the names of two referees, should be sent to the Borough Surveyor and Water Engineer, 2 Priory Place, Doncaster, to arrive not later than the 13th SEPTEMBER, 1960.

Canvassing will disqualify, and applicants must state whether or not they are related to any member or Senior Officer of the Council.

H. R. WORMALD, Town Clerk.

1 Priory Place,
Doncaster.
22nd August, 1960.

CITY OF PLYMOUTH.
WATER DEPARTMENT.APPOINTMENT OF
SENIOR CIVIL ENGINEERING ASSISTANT.
GRADE A.P.T. V (£1,220-£1,375 PER ANNUM).

APPLICATIONS are invited from CHARTERED CIVIL ENGINEERS experienced in waterworks construction and design.

Experience in reinforced concrete construction and the preparation of Contract documents is necessary.

The appointment is subject to the provisions of the Local Government Superannuation Acts and to the successful candidate passing a medical examination.

Applications, stating age, qualifications and experience, and the names of three persons to whom reference may be made, should be delivered to the undersigned not later than 12th SEPTEMBER, 1960.

N. G. ELLIOT, M.Sc., M.I.C.E., City Water Engineer.

22 Portland Square,
Plymouth.

ASHTON-IN-MAKERFIELD URBAN DISTRICT COUNCIL.

NEW SEWAGE DISPOSAL WORKS—EDGE GREEN.
APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited for the POST of RESIDENT ENGINEER to supervise on behalf of the Council and under the direction of their Consulting Engineers, MESSRS. WARD, ASHCROFT AND PARKMAN, the construction of concrete and cast-iron sewers and rising mains, reinforced concrete water retaining structures, pumping stations and ancillary works.

The salary will be £1,250 per annum, plus £250 per annum subsistence and travelling allowance.

The duration of the appointment is expected to be approximately two years.

Applications, endorsed "Resident Engineer," stating age, qualifications and full details of previous experience, together with the names and addresses of three referees, should be delivered to the undersigned not later than MONDAY, 17th October, 1960.

FRANK DEAN, Clerk of the Council.

Town Hall,
Ashton-in-Makerfield.

DOWNHAM RURAL DISTRICT COUNCIL.
APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited for the PERMANENT APPOINTMENT OF RESIDENT ENGINEER to supervise, under the direction of Consulting Engineers and the Council's Surveyor, the construction of village sewerage schemes throughout the district.

The salary offered is £1,000 p.a., together with a travelling allowance on the essential users scale for 10-h.p. cars, and if required, housing accommodation will be made available. The appointment will be subject to the Local Government Superannuation Acts and the National Joint Council's Scheme of Conditions of Service.

Applicants should have had extensive experience in a similar capacity and must be prepared to accept supervisory duties on other capital works if required.

Applications, stating age, qualifications and experience, together with the names and addresses of two referees, should be received by the undersigned not later than MONDAY, 26th September, 1960.

A. B. HARRISON, Clerk of the Council.

Council Offices,
London Road,
Downham Market,
Norfolk.

APPOINTMENTS VACANT

GOVERNMENT OF SARAWAK.
PUBLIC WORKS DEPARTMENT.

ROAD ENGINEERS.

Qualifications: Candidates, aged 28-50, must either have a University degree, or equivalent, recognised by the Institution of Civil Engineers, and two years' experience, or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers, and have not less than five years' experience on civil engineering work. Some experience in soil mechanics is required.

Duties include working ahead of a road construction team to advise on sites of suitable materials for fill and for road sub-base, taking charge of a section of a team, and directing and organising local labour.

Terms: On contract for one tour of three years in the first instance, with gratuity on satisfactory completion of engagement.

Emoluments in Scale £1,386-£2,324 p.a.

Free passages. Generous home leave. Education allowance. No income tax.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD12/24/05/D14.

BRITISH GUIANA.

PUBLIC WORKS DEPARTMENT.

ABARY BRIDGE CONSTRUCTION.

RESIDENT ENGINEER.

Qualifications: Candidates must be Corporate Members of the Institution of Civil Engineers and have had experience involving the erection of steel and reinforced concrete bridges and piling work. Experience in handling of large contracts is also essential.

Duties: Responsible for the erection of a 150ft. span steel bridge on concrete piles with three reinforced concrete approach spans at each end.

Terms of Appointment: On contract for one tour of two years, with substantial gratuity.

Salary £2,500 p.a. Free passages; generous leave.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD12/30/022/14.

BRITISH GUIANA.

PUBLIC WORKS DEPARTMENT.

ENGINEERS (STRUCTURES).

Qualifications: Corporate membership of the Institution of Structural Engineers with at least five years' experience in a designer's office.

Duties: The preparation of designs and drawings for buildings, bridges, and other structures in reinforced concrete, structural steel and timber.

Emoluments: In scale £1,100-£1,400 p.a.

Terms of Appointment: On contract for one tour of three years, with substantial gratuity (22½ per cent. of salary).

Free passages. Generous leave.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD12/30/023/D14.

COUNTY BOROUGH OF SUNDERLAND.

PUBLIC WORKS DEPARTMENT.

SITE AGENT REQUIRED for new Technical College project (salary range £1,065 to £1,220 p.a.), placing will be in accordance with qualifications and experience.

Applicants should have had experience in a similar capacity for contracts of £500,000 and upwards in value, and should apply for further details and Forms of Application to the Public Works Manager, 1 and 3 Otto Terrace, Sunderland.

Closing date for completed forms—12th SEPTEMBER, 1960.

Canvassing will disqualify.

G. S. MCINTIRE, Town Clerk.

Town Hall,
Sunderland.

BOROUGH OF EALING.

draughtsman for civil engineering work. Misc. Grade IV (£630-£690), inclusive of London Weightings.

Full particulars and Application Forms obtainable from the BOROUGH SURVEYOR, Town Hall, Ealing, W.5.

Closing date: 19th SEPTEMBER, 1960.

E. J. COPE-BROWN, Town Clerk.

CITY OF LEICESTER.

NEW SEWAGE DISPOSAL WORKS, WANLIP.

APPOINTMENT OF TEMPORARY INSPECTOR.

APPLICATIONS are invited from persons with suitable experience in the supervision and control of extensive reinforced concrete work, to work under the direction of the Resident Engineer.

The scheme has been designed by MESSRS. J. D. AND D. M. WATSON, Consulting Engineers, London.

Basic salary £15 to £18 per week (according to age and experience) for 44-hour week plus expected regular overtime of 10 hours per week.

Applications, stating age, experience, and the names of two referees, to the undersigned not later than SATURDAY, 10th September, 1960.

JOHN L. BECKETT, M.I.C.E., City Surveyor.

Town Hall,
Leicester.

SOUTHAMPTON CORPORATION
WATERWORKS.

SENIOR CIVIL ENGINEERING ASSISTANT.

APPLICATIONS are invited for the ABOVE APPOINTMENT, which is on the permanent establishment. Salary in accordance with A.P.T. Grade IV (£1,065-£1,220 p.a.).

Applicants must be Associate Members of the Institution of Civil Engineers, and experience in waterworks practice is essential.

Housing accommodation available in approved cases, and approved removal expenses reimbursed up to a maximum of £50.

Conditions of appointment and Forms of Application from C. A. HARRADINE, M.I.C.E., Waterworks Engineer and Manager, Civic Centre, Southampton.

Applications to be returned by TUESDAY, 20th September, 1960.

APPOINTMENTS VACANT

MANCHESTER CORPORATION.

Vacancy for QUANTITY SURVEYOR in Grade A.P.T. IV (£1,065-£1,220), on the Temporary Staff for work in connection with the design and supervision of major extensions at Davyhulme Sewage Works. The work is being staged in a series of operations covering a period of ten years at a total cost of over £6m.

Candidates must be appropriately qualified and should have had experience in the preparation of Bills of Quantities and Specifications, interim valuations and settlement of final accounts. Housing accommodation and removal expenses.

Applications, stating age, education, qualifications and experience, with the names of two referees, to the CITY SURVEYOR, Town Hall, Manchester, 2, by 19th SEPTEMBER, 1960.

MANCHESTER CORPORATION.

CLERKS OF WORKS, Grade A.P.T. II (£765-£880), REQUIRED to assist in the supervision of (a) sewer and road contracts on housing estates; and (b) at Davyhulme Sewage Works, where major extensions are being undertaken. The persons appointed will be required to work a 44-hour week.

Applications, stating which post desired, and also giving details of age, experience, etc., to the CITY SURVEYOR, Town Hall, Manchester, 2, by 19th SEPTEMBER, 1960.

MELTON AND BELVOIR RURAL DISTRICT COUNCIL.

APPOINTMENT OF CLERK OF WORKS (TEMPORARY).

APPLICATIONS are invited from suitably experienced persons for the TEMPORARY POST of CLERK OF WORKS to supervise housing schemes under the direction of the Council's Engineer and Surveyor.

The estimated period of the appointment will be 18 months, and the salary offered is £16 per week. The person appointed will be required to provide his own car, for which an allowance will be made on the National Scale.

Forms of Application and details of the appointment may be obtained from the Engineer and Surveyor, Warwick Lodge, Dalby Road, Melton Mowbray.

A. P. MARSH, Clerk to the Council.

Warwick Lodge,
Dalby Road,
Melton Mowbray.
28th August, 1960.

STRUCTURAL ENGINEERS.—Vacancies exist for STRUCTURAL DESIGNERS and DESIGNER/DETAILERS. Positions are available which offer excellent prospects and opportunity for permanency. Pension scheme.—Apply in confidence, giving age, details of education, training, qualifications and experience, with an indication of salary required, to Personnel Officer, ROBERT M. DOUGLAS (CONTRACTORS), LTD., 395 George Road, Erdington, Birmingham, 23.

STEIN ATKINSON VICKERS HYDRAULICS, LTD., wish to appoint a TECHNICAL ASSISTANT in their expanding mobile sales division at their head office in Knightsbridge. The duties will include the preparation of schematic hydraulic circuit diagrams and proposals and the carrying-out of a sales office routine. A knowledge of hydraulics as applied to earthmoving or mechanical handling machinery is desirable, and a period of training at one of the main works in Surrey will be arranged.—Write, stating age and details of past experience, to the Sales Manager, Stein Atkinson Vickers Hydraulics, Ltd., 197 Knightsbridge, London, S.W.7.

J. I. CASE COMPANY, LTD.,

Will appoint additional AREA REPRESENTATIVES in the North-East, Midlands, South-East.—If you are an absolutely first-class Earthmoving Representative and you wish to join a progressive and rapidly expanding company, we invite you to apply, in the first instance, in complete confidence, to:

Sales Manager,
J. I. CASE COMPANY, LTD.,
Mill Road, West Drayton, Middlesex.

CIVIL ENGINEER REQUIRED by firm engaged on motorway works, large-diameter sewers, pipelines and other works in Midlands and South of England. Applicant should have had some previous site experience and be capable of setting-out and supervising works. Progressive appointment for keen and enthusiastic salary.—Apply, giving details of age, experience, salary required, and when available, to SMITHS CONTRACTORS (CHELTENHAM), LTD., Southam Court, 98 Prestbury Road, Cheltenham, Tel.: Cheltenham 56473.

JUNIOR CIVIL ENGINEER for site work in the Midsley area. Enthusiasm, drive and initiative more important than qualifications.—Write in first instance, with full details, in strict confidence, to D. S. O'BRIEN AND CO., Olive Mount, Birkenhead.

PLANT MANAGER for ready-mixed concrete. Suitably experienced man is required to take full responsibility for production and general management of a large ready-mixed plant and transport fleet in the North of England. Salary £900-£1,100 and company car provided.—Write Box V.2581, "The Contract Journal."

MANAGER REQUIRED for Midlands Joinery works attached to English and foreign sawmills. Work is varied and specialised, consisting of special house joinery, high-class oak, teak, etc., special machine cases of large dimensions, fencing, gates, interwoven panels, portable buildings, etc. Must be able to cost and take complete control of department. Must be man of ambition and prepared to go ahead and extend.—Apply with full particulars, copy references, etc., to WM. IVENS AND SONS (TIMBER MERCHANTS), LTD., 128 Railway Terrace, Rugby.

EXPERIENCED MANAGER to run complete softwood department. Must be of good disposition, hard-working and ambitious.—Write, with copy references, salary required, etc., to Box V.2505, "The Contract Journal."

SECTION FOREMEN REQUIRED immediately for bridge contract in Worcester.—Apply on site, or write to General Foreman, LOMOUNT CONSTRUCTION, LTD., Site Office, adjoining The Rectory, Frimland, near Hadzor, Droitwich. Tel.: Droitwich 2004.

CARPENTERS REQUIRED immediately for bridge contract in Worcester. Production bonus and subsistence.—Apply on site, or write to General Foreman, LOMOUNT CONSTRUCTION, LTD., Site Office, adjoining The Rectory, Frimland, near Hadzor, Droitwich. Tel.: Droitwich 2004.

APPOINTMENTS VACANT

AGENTS, GENERAL FOREMAN, FOREMAN CARPENTERS, GANGERS—If you are top of your grade in the above positions and have previously and recently carried out large building contracts, we have a vacancy for you on one of several large, interesting contracts about to start in the Midlands area.—We invite your application and you should give full particulars and what terms you want to **WILSON LOVATT AND SONS, LTD.**, Clarence Street, Wolverhampton.

BUILDING ESTIMATOR—A permanent position with an old-established building and civil engineering contractor with an expanding business in the Midlands area, covering all types of construction, invites applications from senior surveyor-trained Estimators. Applications should state training, experience, age, and terms required, to **WILSON LOVATT AND SONS, LTD.**, Clarence Street, Wolverhampton.

PRECISE SURVEYS, LTD.

Invite applications from **SENIOR LAND AND ENGINEERING SURVEYORS** to fill permanent posts at home and overseas in near future. Excellent prospects; hard work; long hours; good remuneration.

PRECISE SURVEYS, LIMITED.

East Stour, Dorset.

MASSEY-FERGUSON industrial distributors (South-West location) **REQUIRE A SALES REPRESENTATIVE** with a contracting and building trades background, to expand sales of industrial tractors, diggers, compressors, etc.—Please write fullest details in confidence to Box V.2543, "The Contract Journal."

MANUFACTURERS OF CABINET FURNITURE are extending their activities into contract field. They have an interesting position for a man of high calibre who is already in contact with executives of building contractors, firms of architects, local authorities, hospital management committees and office furnishing contractors.—Write for interview to Box V.2508, "The Contract Journal."

SENIOR ESTIMATOR REQUIRED by firm of civil engineering contractors. Head office appointment. Reading area. Permanent and progressive post, with superannuation scheme in operation.—Write in confidence, stating age, full details of experience, with past employers, and salary required, to Box V.2510, "The Contract Journal."

YOUNG QUANTITY SURVEYOR REQUIRED by established and growing company of sportsfield and civil engineering contractors for preparation of interim certificates and final bills.—Apply to **E. DOE AND SONS (CONTRACTS), LTD.**, Fyfield, Essex. Telephone: Fyfield 238.

W. J. SIMMS SONS AND COOKE, LTD., have a vacancy in their Birmingham office for an **ASSISTANT** to the Estimator. The position is permanent and offers scope to a young man with a good quantity surveying experience. Superannuation scheme is operative, and successful applicant will be invited to join after satisfactory probationary period.—Apply in writing, stating age, experience, and salary required, to 133 Marshall Lake Road, Shirley, Solihull, Warwickshire. Envelope should be marked Private and Confidential.

SITE MEASURING AND COSTING SURVEYORS

REQUIRED for bridges contract near Grantham. Opportunities to travel later. Staff appointment; pension fund, etc. Age 21 to 30. Previous site experience essential, and knowledge of standard methods of measurement important. There is an additional vacancy on a contract near Stevenage.—Apply in confidence, quoting Ref. SC.85, to:

Contract Labour Department,
SIMON-CARVES, LIMITED.
Cheshire Heath, Stockport, Cheshire.

CIVIL ENGINEER, experienced in marine work. **REQUIRED** for long-term employment on Humber-side.—Application to Box V.2530, "The Contract Journal."

JUNIOR ENGINEERS REQUIRED for tunnelling contract in S.E. London area.—Apply stating age and brief particulars to **KINNEAR, MOODIE AND CO., LTD.**, 299 Hither Green Lane, London, S.E.13.

WANTED, First-class **GANGERS**. No other need apply. Top rates paid.—**C. J. PEARCE AND CO., LTD.**, Southall, Dawley, Wellington, Shropshire. Dawley 521.

QUANTITY SURVEYOR—**ASSISTANT QUANTITY SURVEYOR** REQUIRED by major firm of building and civil engineering contractors, initially for extensive hydro-electric project near Inverness. This appointment will be permanent, with good salary and conditions, and entry into superannuation scheme after 12 months' service.—Applications, giving details of training and experience, will be treated in strict confidence and should be addressed to **THE MITCHELL CONSTRUCTION CO., LTD.**, Wharf Works, Peterborough, Northants.

SITE QUANTITY SURVEYORS REQUIRED for building and civil engineering contracts in the North-West and Manchester areas. Local men preferred, but opportunities to travel later. Must have previous experience in site measurement and be able to prepare interim and final certificates under R.I.B.A. and I.C.E. conditions. These are staff appointments and pensionable. Good salaries in accordance with ability and experience. Allowances paid.—Apply to Contract Labour Department, **SIMON-CARVES, LTD.**, Cheshire Heath, Stockport, Cheshire, quoting Ref. SC.95.

SITE ENGINEER REQUIRED by North-Western Civil Engineering Company specialising in pipe-laying, C.I. and steel (welded) and small construction works. The appointment offers excellent prospects with good salary and conditions. Superannuation scheme in operation.—Write to General Manager, Box V.2559, "The Contract Journal."

GENERAL FOREMAN REQUIRED for private estate housing sites in South, South-East and East. Applicants should have at least five years' previous experience of private estate development, including roads and sewers. Good salary and bonus paid. Every effort will be made to provide continuity of work for those proving their efficiency.—Write, giving full details of experience, to Box V.2580, "The Contract Journal."

CHARGEHAND WORKSHOP FITTER REQUIRED. Good rates, permanency, pension scheme. Local man preferred.—**MOORE'S PLANT, LTD.**, TOT 0401, Ext. 1.

APPOINTMENTS VACANT

LEVETON OF LEEDS, LTD., Caterpillar Dealers. **SENIOR SALESMAN**, Earthmoving Equipment. We hold the franchise for the world's leading manufacturers of earthmoving equipment—Caterpillar. Due to further expansion, we now wish to appoint a Senior Salesman for our outside team. We shall appoint for this position a man over 32 years of age, with a sound knowledge of the earthmoving industry and used to negotiation at management level. The successful applicant will be one of the hardest worked, highest paid men in the industry. All applications will be treated in strict confidence.—Please apply in duplicate, giving full details of education, qualifications, experience, and copies of references, to the Sales Director, Leveton of Leeds, Ltd., Gelderd Road, Leeds.

EXPERIENCED SITE ENGINEERS/SURVEYORS REQUIRED by civil engineering contractors based in Hull. Fully experienced setting-out, measuring, valuations and final accounts, and able to work with minimum supervision. Pension and life assurance scheme in operation. Excellent prospects for right man.—Write, giving full details, in strictest confidence, to Box V.2575, "The Contract Journal."

AGENT REQUIRED by established firm of sports-ground and landscape contractors, based in Cheshire area, to take charge of sportsground section of company. A bonus scheme is operative and salary according to experience. Vehicle provided.—Write Box V.2557, "The Contract Journal."

JUNIOR ENGINEERS REQUIRED for contracts in Devon. Applicants should have at least three years' site experience with a reputable contractor. The posts are intended to be permanent and offer excellent opportunities in an expanding organisation. Apply in writing, giving age and full details of experience, to **DEVON CONTRACTORS, LTD.**, Venny Bridge, Whipton, Exeter.

SOILS DRILLER

REQUIRED for West Africa. Applicants must have had diamond core drilling and soils shell and auger boring and sampling experience. Overseas experience and good references required. One-year tour. Generous salary and allowances.—Please write, quoting 0.246, to:

The Personnel Officer,
THE CEMENTATION COMPANY, LTD.
20 Albert Embankment, London, S.E.11.

REQUIRED for Motorway Project.—Remunerative posts as under. **REQUIRED** for firm of civil engineering contractors. All posts offer the opportunity for advancement and an interesting career: **PROJECT MANAGER**, **JUNIOR ENGINEERS**, **SENIOR SITE ENGINEERS**, **GENERAL FOREMEN**. Applicants must have had previous experience of motorway construction and be able to prove successful background.—Write, with fullest details, outlining previous experience, qualifications (if any), and salary required, to Box V.2569, "The Contract Journal."

WORKSHOP FITTERS REQUIRED. Good rates, permanency, pension scheme. Local men preferred.—**MOORE'S PLANT, LTD.**, TOT 0401, Ext. 1.

OVERALLS AND TEXTILES—CONTRACT CLERKS WANTED. Convert with forms of tender and sampling. Experience of hospitals, L.A.s and industry an advantage. In reply, state age, experience and present remuneration.—**THE WESTBROOK LINEN CO., LTD.**, 59 Holloway Road, London, N.7.

SENIOR ESTIMATOR REQUIRED.—Applications are invited from men who are fully experienced in estimating for all types of civil engineering and building works. Pension scheme in operation, and car provided.—Apply in writing, stating age, full particulars of experience, previous employers, salary expected, and when free to commence, to Managing Director, **CURRALL, LEWIS AND MARTIN, LTD.**, 11 Booth Street, Birmingham, 21.

EXPERIENCED PLANT MANAGER REQUIRED by North-West firm of building and civil engineering contractors. Capable of taking charge of repair and maintenance shop and outside site plant organisation. This position will carry a good salary for the right person. Only experienced men need apply, in confidence, stating age and experience, to Box V.2573, "The Contract Journal."

CIVIL ENGINEER REQUIRED by progressive medium-size civil engineering company operating in the South-West, to supervise small to medium contracts within an area. Age between 25-35 years; salary according to qualification. Car provided. Excellent prospects.—Write Box V.2579, "The Contract Journal."

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REQUIRED immediately, with several years' experience of marine works, medium-sized civil engineering works, embracing piling, temporary works, etc. Excellent salary to man of proved ability. Bonus and superannuation schemes in operation.—Reply in confidence to:

The Contracts Director,
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40 Piccadilly, London, W.1.

SITE ENGINEER.—Applications are invited for appointment as Site Engineer on an important jetty contract at Hull. Applicants should be not more than 35 years of age, and should preferably have had experience in heavy pile driving in tidal conditions and be fully capable of handling all setting-out and measurements. Appointments will be of about 18 months' duration, with prospects of permanency. Write in confidence, stating age, qualifications, experience, and salary required, to **THE YORKSHIRE HENNEBIE CONTRACTING CO., LTD.**, Hennebique House, 123 The Mount, York.

SUB-AGENT, with wide experience of marine and heavy civil engineering works, **REQUIRED** by major firm of civil engineering contractors. Appointment will be in N.E. England in first instance, with good promotion prospects.—Write to Box V.2552, "The Contract Journal," quoting Ref. KLM/8.

OLD-ESTABLISHED Engineers manufacturing road construction machinery wish to appoint **SALES REPRESENTATIVE** with knowledge of such equipment. Good prospects for right man, and pension scheme.—Write full details, please, to Sales Director, Box V.2511, "The Contract Journal."

CAPABLE GENERAL FOREMAN REQUIRED for road and sewer contracts, roadsman preferred. Experience on good concrete road construction, and the production of irrefutable references essential. Write first to **PEIRCE CONTRACTORS (1960), LTD.**, Farnham Road, Bishop's Stortford, Herts.

APPOINTMENTS VACANT

CONTRACTS MANAGER for London area building works—old-established company. Range £50,000 up to £5m. Possibility of board appointment to right man. Experience of large works and good profits record essential. Professional/technical qualifications preferred, and age under 40. Annual earnings in region of £2,500/£3,000.—Write Box V.2619, "The Contract Journal."

CIVIL ENGINEERING ASSISTANTS to supervise contracts, mainly in London area.—Apply giving full details of experience, to **CAFFIN AND CO.**, 25 Craven Street, W.C.2.

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REQUIRED for head office and site duties.—Apply:

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REPRESENTATIVE—Important Derbyshire quarrying organisation **REQUIRES** additional **REPRESENTATION**. Applicants to be under 40 years of age, possessing good sales knowledge and experience of quarrying trade. Full information of education, past and present business positions and employers, and stating whether married or single, to be given in confidence. Contributory pension scheme in operation. Car provided. Salary according to experience.—Write Box V.2558, "The Contract Journal."

QUANTITY SURVEYOR REQUIRED by civil engineering contractors to work from head office. This is a new appointment to meet expansion. Applicants must have had wide experience in civil engineering and building contracts. Estimating experience would be an advantage.—Please apply by letter, giving full details, including experience, qualifications, age and salary required, to General Manager, **INGRAM CONSTRUCTION, LTD.**, 75 Hobs Moat Road, Solihull, Warwickshire, marking envelope "Personal."

SOUTH-WEST ENGLAND.—National contractors invite applications from experienced men for the following positions for their local office: **SUPERVISORS**, preferably engineer trained with good experience in the control of a number of medium- and large-sized reinforced concrete contracts essential, together with knowledge of modern methods of construction and planning; **GENERAL FOREMEN**, preferably carpenter trained and with experience in charge of reinforced concrete construction; **SENIOR PLANNING ENGINEERS** for pre-estimate planning, detailed programming of full contracts, and building contracts including co-ordination of site planning engineers. All trades, with specialised knowledge of reinforced concrete. The appointments will be to the permanent staff, and offer interesting and varied work with excellent opportunities for increased responsibility and/or advancement to more senior positions with appropriate remuneration.—Please send full details, in confidence, to Box SW.3693, A.K. Advtg., Ltd., 212a Shaftesbury Avenue, London, W.C.2.

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APPLICANT REQUIRED to take full charge of timber engineering department of well-known timber importer and merchant in Home Counties. A new workshop is being specially built for this purpose and the business is already progressing satisfactorily. Someone with knowledge of this kind of work, with enthusiasm and drive, is needed in order to expand it. Permanent post for right man. Car provided and pension scheme in operation. Write Box V.2583, "The Contract Journal."

MOWLEM **REQUIRE A DRAUGHTSMAN/DESIGNER** at their head office. The duties will comprise the design and detailing of mechanical and structural work, mainly in connection with civil engineering construction plant.—Applicants should have technical training to H.N.C. (Mechanical) standard and should write giving age, experience, and salary required, to **JOHN MOWLEM AND CO., LTD.**, Plant Department, 91 Ebury Bridge Road, S.W.1.

TURRIFF CONSTRUCTION CORPORATION DEVELOPMENT GROUP is to appoint **SEVERAL PROJECT ENGINEERS** each to cover a number of contracts co-ordinating the interests and efforts of clients, design and construction teams. Must have comprehensive site and office experience. The wide interests of this Development Group will call for men of drive and initiative with either civil, structural, mechanical or architectural background. Attractive salaries, bonus and pension scheme. Suitable transport provided.—Write full particulars to D. H. Duckworth, Chief Executive, Development Group, Turriff Building, Great West Road, Brentford, Middx.

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Building Products Division has a vacancy for a **SALES REPRESENTATIVE** in the Midland area to specialise in Flexipipe pitch fibre pipes. Candidates should have specialised knowledge of drainage and piped services, preferably with selling experience through builder merchants, municipal authorities and large industrial undertakings. They should already be living in the Midlands. Preferred age 27 to 38 years. A company car is provided, and there is a contributory superannuation fund.—Applicants should apply, in strict confidence, stating age, present salary and full particulars of education, qualifications and experience, to:

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Bowater House, Knightsbridge, London, S.W.1.

KEEN young **ENGINEER/AGENT** for road and sewer contracts. Commencing salary £1,000 p.a. annu; future prospects according to performance.—Write first to **PEIRCE CONTRACTORS (1960), LTD.**, Farnham Road, Bishop's Stortford, Herts.

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WANTED. QUARRY MANAGER for limestone quarry producing all grades aggregates and coated materials. Must have good sound practical experience and able to get results. Four-figure salary after trial period. Accommodation will be made available after proven ability. — Write Box V.2584. "The Contract Journal."

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SITE ENGINEER REQUIRED for setting-out and levelling and keeping records; large-diameter water main contract, Chester area. Good salary and bonus will be paid to efficient and conscientious man. — Apply R. G. HORTON, LTD., Contractors, Brierley Hill, Staffs.

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GRAYSTON PLANT AND ENGINEERING CO., LTD. REQUIRE the immediate services of a young likely OUTSIDE REPRESENTATIVE for their Lancashire branch at Haydock Lane, Haydock, St. Helens. Car supplied. Excellent prospects. — Apply Mr. W. Haigh, General Manager, Ashton-in-Makerfield 7631.

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OLD-ESTABLISHED company invite applications from CIVIL ENGINEER AGENTS, aged about 30, for appointment to staff of an expanding organisation in South Lancashire/Cheshire. The successful applicants must be experienced in roads, drainage, sewage disposal, reinforced concrete works, etc., and have previously held a similar position with a reputable contractor. Excellent prospects are offered to keen, ambitious men willing to accept responsibility. — Write in confidence to Box V.2620. "The Contract Journal."

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APPOINTMENTS VACANT

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SALES BY TENDER**COUNTY BOROUGH OF WIGAN. DISPOSAL OF PLANT.**

TENDERS are invited for the FOLLOWING SECOND-HAND ITEMS of PLANT, which may be inspected at the Corporation's Sovereign Road Depot during normal working hours:—

- (a) Dumping Dumper, Petrol driven, purchased Jan., 1952, capacity 1½ cu. yd., Registered No. JP9554.
- (b) Dumping Dumper, Petrol driven, purchased Jan., 1952, Registered No. JP9555. This machine is not in working order.
- (c) Two Concrete Mixers, Millars, Nos. 7 and 9, capacity 7/5, Petrol driven. Purchased 1947.
- (d) Three Concrete Mixers, Millars, Nos. 6, 8 and 10, capacity 7/5. These machines are not in working order.
- (e) Concrete Mixer, Millars, No. 18, capacity 10/7, Diesel Oil, purchased Nov., 1952.
- (f) Concrete Mixer, Blaw Knox, purchased Sept. 1947, Diesel Oil, capacity 21/14.
- (g) Ashurst Tar Tanker, purchased Sept., 1958, capacity 700 gallons, two oil-heated fires, fitted with air and fuel injector pump and mounted on four solid rubber wheels.
- (h) Pumps: One 5in. Centrifugal, Petrol driven; One 4in. Centrifugal, Petrol driven; Two 4in. Diaphragm, Petrol driven; One 4in. Double-acting Diaphragm, Petrol driven; Five Hand Pumps.
- (i) Winches: Two Hand-operated Winches for sewer scraping.

The 21/14 concrete mixer may be seen at the Corporation's Works Department, Frodo Lane, and the winches are on view at Tunstall Lane Depot.

Tenders, which should state the offer separately for each item, in plain sealed envelopes, endorsed "Plant—Streets Department," must be delivered to the undersigned not later than **FRIDAY, 9th September, 1960.**

ALLAN ROYLE,
Town Clerk.

Municipal Buildings,
Wigan.

PAISLEY CORPORATION.**SALE OF WEIGHBRIDGE.**

OFFERS are invited for a 30-ton Avery Self-indicating **WEIGHBRIDGE**, Type A745/137, with Tare Bars and 20in. Platform, purchased Nov., 1952. This machine is approx. 30 years old and in good working condition.

Application may be made for Conditions of Sale, Tendered for inspection, to the Burgh Engineer, 14 Gilmour Street, Paisley.

ALEX. COCHRAN,
Town Clerk.

Municipal Buildings,
Paisley.
August, 1960.

BOROUGH OF TWICKENHAM.

TENDERS are invited for the PURCHASE and REMOVAL of **BOILERS, STEAM ENGINE and AUXILIARY PLANT**, etc., from the **HAMPTON WORKS DEAN ROAD, HAMPTON.** Specification and Form of Tender may be obtained from the Borough Engineer, Municipal Offices, Twickenham.

Tenders, in the envelope provided and not bearing any name or mark indicating the sender, shall be delivered to the undersigned not later than 10 a.m. on **THURSDAY, 15th September, 1960.**

The Corporation does not bind themselves to accept the highest or any Tender.

W. H. JONES,
Town Clerk.

Municipal Offices,
Twickenham.

SLOUGH CORPORATION.**SALE OF REDUNDANT PUMPING PLANT.**

OFFERS are invited for the PURCHASE of **REDUNDANT PLANT** at a **DISUSED PUMPING STATION.** The Plant includes a Cornish Boiler, a Steam-driven Pumping Set, a 6-cyl. Diesel Engine, and miscellaneous minor items and scrap materials.

For particulars and Form of Tender, apply to the **BOROUGH ENGINEER**, Town Hall, Slough, with whom arrangements can be made to inspect the items offered for sale.

Final date for receipt of Offers: **15th SEPTEMBER, 1960.**

SALES BY AUCTION

By Order of the Forestry Commission.
VEHICLES, PLANT, MACHINERY AND SPARES

to be sold by **AUCTION** at **LIGHTMOOR DEPOT, CINDERFORD** (Gloucester 12 miles) on **FRIDAY, 23rd SEPTEMBER, 1960**, commencing 1 p.m.
Seven International TD6, TD9 and TD18 Tracked Tractors; Caterpillar D2; Six Fowler FD3 VFs and Challenger III; Bedford 15cwt. and Ford 10cwt. Van; Weaver Steam Cleaner; Six Auto Scythies; Three Dumpers; Stone Crusher; Two Fordson Tractors; Tasker Pole Wagon; Two Ipees; 3-ton L.W.B. Austin; 5-ton Bedford Tipper; Norton Motor Cycle; Nissen Hut; large quantity of Caterpillar and International Spares; and other Miscellaneous Items.

MORRIS, MARSHALL AND POOLE, F.A.I., Welshpool (Tel. 2266/7) and Newtown (Tel. 321/2), Montgomeryshire.
Catalogues on application to the above.

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MECHANISED FARMING EQUIPMENT

WILLIAM H. BROWN AND SON, instructed by Messrs. R. H. Crawford and Son, Ltd., will sell by **AUCTION** as above on **THURSDAY, 15th September, 1960**, commencing 10.30 a.m.

43 TRACTORS: MASSEY-HARRIS 21 COMBINE HARVESTER; MARSHALL THRESHING MACHINE; SIX BALERS; 13 TRAILERS; RANSOMES and MILES MOLE DRAINERS; large quantity of modern **MECHANISED FARMING EQUIPMENT**: SHERMAN HYDRAULIC EXCAVATOR; DOEMOBILE EXCAVATOR; BUCKEYE TRENCING MACHINE; LEADWELL 2-TON COMPRESSOR UNIT; LISTER 22-KW LIGHTING PLANT; MORRIS 5-TON MOBILE CRANE; LINER CONCRETE MIXER; Aveling Walking Motor Dumper Cart; Marshall 6in. Roll; Contracting and Workshop Equipment; Machinery; Spares and Miscellaneous Effects.

Sale to commence at 11 a.m. promptly.

Refreshments available.
Catalogues from the Auctioneers, 14 Wide Bargate, Boston (Tel. 3620); and Northgate House, Sleaford (Tel. 447/8).

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SALES BY AUCTION

By Order of the Secretary of State for War.
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2 LARGE HORIZONTAL STEAM BOILERS, by Danks (Netherton) and Cochran, complete with Electric-driven Stokers, Motors and Fittings; 4 HORIZONTAL STORAGE CALORIFIERS; 2 VERTICAL PRESSURE FILTERS; VERTICAL WATER SOFTENER; Boiler Feed Pumps, Recorders, Steam and Water Piping and Fittings; 2 PULSOMETER WATER PUMPS WITH ELECTRIC MOTORS AND GEAR; ARMY BUILDINGS, including LARGE STEEL-FRAMED LAUNDRY BUILDING 206ft. x 74ft., STEEL ROMNEY HUT 96ft. x 36ft., NISSEN HUTS, etc.

SCAMMELL AND SMITH are instructed to sell the ABOVE by **AUCTION** in **LOTS** on the site, as above, on **WEDNESDAY, 7th SEPTEMBER, 1960, at 12 Noon.**

On View Two Days prior to the Sale. Admission by Catalogue (price 4d.), of the Auctioneers, the Auction Mart, Eastleigh, Hants. (Tel. 2201-3), and at Chandler's Ford, Hants.

By Order of the Secretary of State for War.
E R

M.O.A. STORAGE DEPOT, ROTHERWAS, HEREFORD (about two miles from centre of the city).

RUSSELL, BALDWIN AND BRIGHT, LTD., are instructed to sell by **AUCTION** at the above **DEPOT** on **FRIDAY, SEPTEMBER 16th, 1960, at 10.30 a.m. precisely.**

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Admission.—One catalogue will admit two persons on view days and one on Sale day.

The Secretary of State for War and/or the Minister of Aviation reserves the right to refuse admission. View days: 13th, 14th and 15th September, also morning of Sale.

Catalogues, 1/- each (P.O.'s only), obtainable from the Auctioneers, Dept. C.L. 20/21 King Street, Hereford. Telephone 4366—3 lines.

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CLAMP AND WILLS have received instructions from John W. Hardy, Esq., F.C.A., the Liquidator, to sell by **AUCTION** from catalogue, on the PREMISES as above, at 10.30 a.m. on **THURSDAY, SEPTEMBER 15th, 1960**, the Valuable

BUILDERS' PLANT, MACHINERY, EQUIPMENT, STOCK-IN-TRADE AND MOTOR VEHICLES.

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A Commer 1½-ton Van (in new condition); Austin A70 Saloon Car; Austin 6-wheel Truck, with Low-load Trailer; One 7MT Size Limer Non-tilt Concrete Mixer; Another Two Motor Mixers; a Builders' Conveyor by Wild; Calfoeder and Dumore by Aveling-Barford; fine Self-motorised Woodworking Machinery by WADKIN, comprising: Circular Saw Benches, Combined Surfer and Thicknesser, Chisel Morticing Machine, Sandoopering Machine, and a Jointing and Tenoning Machine; 1½in. Hand Drill by Black and Decker; large quantities of Glazed Stoneware Drain Pipes; approx. 5,000 Blue Staffordshire and Common Bricks; Scaffolding Battens; considerable stocks of well-seasoned TIMBER; Two Wenden Sheds; many thousands of Quarry and Glazed Tiles; Ironmongery; Dustbins; Six new 9.00 x 20 12-ply India Super Tyres; Plaster Boards; 1½ tons Nails; Surveyor's Level; Small Tools; and many other items far too numerous to mention.

AT 12 NOON PROMPTLY THE MOTOR VEHICLES WILL BE OFFERED.

On view at the premises as above on Wednesday, September 14th, 1960, from 9.30 a.m. until 5 p.m., and morning of Sale.

Included in the sale is a plot of **FREEHOLD BUILDING LAND** of approx. 300 sq. yd. at **WESLEY STREET, ILKESTON**, with planning permission for the erection of one house.

Catalogues may be obtained from the Auctioneers' Offices, 68 St. Peter's Street, Nottingham (Tel. 50997/8); or from the Liquidators, Messrs. HARDY, NEWSUM-SMITH, Chartered Accountants, Russell Place, Talbot Street, Nottingham (Tel. 46241), seven days prior to Sale.

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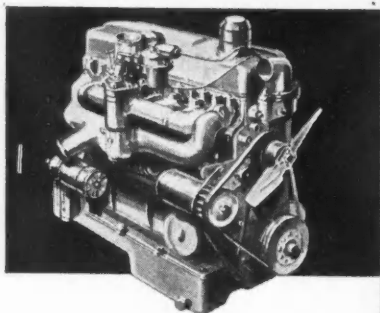
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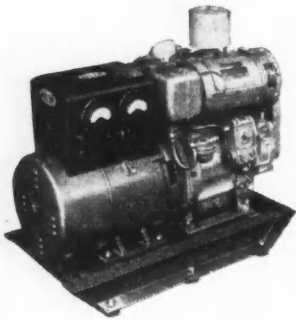
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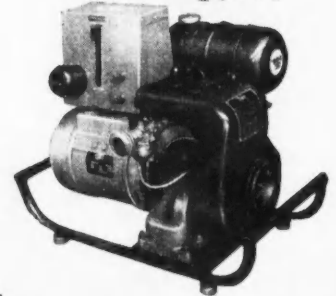


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COUNTY BOROUGH OF HASTINGS.

WATER ENGINEER'S DEPARTMENT.

AUTO-PNEUMATIC UNIT BOOSTING EQUIPMENT.

TENDERS are invited from manufacturers for the SUPPLY of AUTO-PNEUMATIC SELF-CONTAINED BOOSTER UNIT having Duplicate Electrically driven Pumps and Motors, suitable for operation on 240-V single-phase 50-cycles supply, to discharge approx. 1,000 gallons per hour at 150ft. total manometric head, complete with Fully Automatic Starters and Controls, Pneumatic Tank and Air Compressor. Applications for further details of the requirements should be made to the Waterworks Engineer, 28 Wellington Square, Hastings. Tenders, in sealed envelopes endorsed "Booster Pumping Unit," must reach the undersigned not later than 15th SEPTEMBER, 1960. The Corporation will bind themselves to accept the lowest or any Tender.

N. P. LESTER,
Town Clerk.

BOROUGH OF MORECAMBE AND HEYSHAM.

Firms desirous of TENDERING for the WIDENING and IMPROVEMENT, including Storm Water Drainage and ancillary works, of TRUMACAR LANE and ROTHESAY ROAD, approx. 675 lin. yd., should submit their names to the Borough Engineer and Surveyor, together with a deposit of £2, not later than 10th SEPTEMBER, 1960. Tender documents will be issued after the 12th September, 1960. The lowest or any Tender not necessarily accepted.

ROGER ROSE,
Town Clerk.

ESTIMATOR REQUIRED for civil engineering contractors' London office. Applicants should have been previously engaged in the preparation of tenders for earthworks, foundations, r.c. and marine construction, and a sound site experience of such works would be to advantage. The position is progressive and covered by a superannuation scheme. Applications invited in confidence (existing staff advised of vacancy). — Write Box V.2608, "The Contract Journal."

SITE ENGINEERS, Senior and Junior, for large contracts on Salisbury Plain—Apply, stating age, experience, salary required, and when available, to W. E. CHIVERS AND SONS, LTD., Devizes, Wilts. Tel.: Devizes 121.

APPLICATIONS are invited for appointment of an ENGINEERING AND SURVEYING ASSISTANT, preferably between the ages of 25 to 35 years, for work in connection with private housing development and general building contracting work in the Midlands. The applicant should be expert Surveyor and Leveller and should have a sound knowledge of building construction and be able to take-off quantities and prepare final accounts. Accommodation could be provided if required. Applications, stating age, experience, qualifications, and salary required, by letter marked "Private," to Wm. Shepherd, Joint Managing Director, WILLIAM CORAH AND SON, LTD., Aumbury Gap, Pinfold Gate, Loughborough.

ASSISTANT ESTIMATOR for heavy civil engineering works, REQUIRED at Victoria office of national contractor. Qualified Engineer with minimum of five years' site experience considered for training. Minimum remuneration £1,200 p.a.—Write Box V.2603, "The Contract Journal," quoting Ref. H/1/2.

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SITE ENGINEER REQUIRED for setting-out and railway and civil engineering works. Must be prepared to travel within the U.K.—Apply in confidence, giving details of qualifications and experience, to Contracts Manager, EAGRE CONSTRUCTION CO., LTD., East Common Lane, Scunthorpe, Lincs.

GENERAL FOREMEN REQUIRED for railway bridge construction work in North-East England with THE CLEVELAND BRIDGE AND ENGINEERING CO., LTD.—Particulars of qualifications and references to Chief Civil Engineer, P.O. Box 27, Darlington. Previous applicants please re-apply.

JUNIOR ESTIMATOR REQUIRED in civil engineering contractors' office in N.W. London. Applicants should have a background of quantity surveying and some site experience, or similar experience in an estimator's office. Progressive, pensionable position.—Apply RUDDOCK AND MEIGHAN, LTD., Burford House, Harrow View, Wealdstone, Middlesex.

TURRIFF CONSTRUCTION CORPORATION, LTD., requires top-grade SITE CLERK/CASHIER, fully experienced building/civil engineering. Long-term prospects, with good conditions. — Write Group Personnel Manager, Budbrooke Road, Warwick.

CLERK REQUIRED for surfacing department office at head office in Dronfield. Applicants should have had experience in surfacing contracting industry, particularly in regard to planning of work in connection with road, footpath and playground surfacing. A knowledge of estimating an advantage. Pension scheme in operation. Interesting appointment for right man. Apply in confidence, stating age, experience, and present salary, to the Secretary, WM. PRESTWICH AND SONS, LTD., Dronfield, near Sheffield.

QUANTITY SURVEYORS REQUIRED for building and civil engineering work in Scotland. Excellent prospects for men of initiative and drive. Pension scheme: life assurance.—Apply in writing, stating age, education, qualifications, experience, and salary required, to ROBERT M. DOUGLAS (CONTRACTORS), LTD., 395 George Road, Erdington, Birmingham, 23.

WANTED, MOTOR ALTERNATOR SET, mounted on Bedplate, complete with Coupling and Guard. Alternator 40-kVA 0.9 P.F. 36-kW 208-V 3-phase 4-wire; 12 poles for 600 C.P.S. at 600 r.p.m.; screen protected; self-regulating, with plus or minus 2½-V. Motor to drive alternator on full load, input 220/127-V 3-phase 50 C.P.S., at 600 r.p.m.; 10 poles; screen protected; synchronous type for 60 C.P.S. output, with 220-V with S. 2613 or nearabouts.—Write Box E.2609, "The Contract Journal."

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TOLLGATE ISLAND MARGAM.

CONSTRUCTION OF PARK AND GARDENS.

THE CORPORATION invite TENDERS for the ABOVE SCHEME, which comprises the FOLLOWING WORKS:
1,600 lin. yd. 6in. x 2in. Kerbing;
2,000 super. yd. Tarmac Footpath;
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13 Gutters;
850 lin. yd. Chain Link Fencing;
5 Acres Clearing, Ploughing, Seeding, etc., and ancillary works.
2,000 super. yd. Gravel Path;
4 Manholes.
Plans may be inspected at the Municipal Buildings, Port Talbot, and Specification, Bill of Quantities and Form of Tender may be obtained on application to the Borough Engineer, G. V. GRIFFITH, A.M.I.C.E., at the Corporation Office, 11, The Quadrant, Port Talbot. The Corporation will not bind themselves to accept the lowest or any Tender.

W. KING DAVIES,
Town Clerk.

CITY OF SALFORD.

FIRM-PRICE TENDERS are invited for the ERECTION of a HEALTH CLINIC at LOWER KERSAL, Salford.

Plans and General Conditions may be inspected at the Office of the Architects, MESSRS. CRUICKSHANK AND SEWARD, Royal London House, 196 Deansgate, Manchester. Specification, Bills of Materials and Form of Tender (which will be available on the 24th October, 1960) obtainable from the Architects on payment of a deposit of £3 3s. (Three Guineas), which will be returnable on the submission of a bona-fide Tender not subsequently withdrawn.

Tenders are to be addressed to the Town Clerk, Town Hall, Salford, 3, endorsed "Health Clinic—Kersal," as to be received not later than 10 a.m. on MONDAY, 14th November, 1960. The Corporation is not bound to accept the lowest or any Tender.

R. RIBBLESDALE THORNTON,
Town Clerk.

BOOKKEEPER/ACCOUNTANT REQUIRED to take charge of building and civil engineering accounts department, London, N.B. Supervision of small staff: preparation of monthly trading accounts and final accounts. — Apply to CAWOOD, WHARTON AND CO., LTD., 585 Woolwich Road, S.E.7.

CIVIL ENGINEERING ESTIMATOR, aged 25-30, with adequate training and some experience of tendering for general civil works, is REQUIRED by old-established contracting firm, with headquarters in London. This is a permanent appointment, with good prospects, for a suitable applicant. Staff pension scheme in operation.—Write, giving age, salary required, and full details of experience, to Box V.2604, "The Contract Journal."

WANTED, Young Man to train as AGENT for public works contractors in North Wales. State age, experience. Salary commensurate with ability and experience. Good prospects for right person. Write Box V.2615, "The Contract Journal."

T.G. CONSTRUCTION CO., LTD., member of the Tarmac Group, REQUIRE a SENIOR ESTIMATOR for building works up to £500,000 in value. Applications are invited from experienced Estimators in the 30/40 age group who have concentrations in the range of tendering. Pension and life assurance scheme in operation. Car provided.—Only first-class men with the qualifications and experience should apply to the Personnel Officer, T.G. CONSTRUCTION CO., LTD., Ettingshall, Wolverhampton.

SOIL SURVEY AND CONCRETE TESTING TECHNICIANS REQUIRED for long-term engagement. In first instance, successful applicant would be engaged on site works.—Write, giving full details of experience, age, salary required, and copy of references, to Box V.2614, "The Contract Journal."

REINFORCED CONCRETE DETAILED DRAUGHTSMAN REQUIRED. This is a permanent appointment with good prospects.—Applicants must give details of age, experience, qualifications, and salary required, to Personnel Officer, TARMAC CIVIL ENGINEERING, LTD., Ettingshall, Wolverhampton.

SITE CIVIL ENGINEER REQUIRED by contractors, for setting-out and site records. Scarborough area. Good salary, bonus and subsistence to suitable applicant. Excellent prospects for keen young man with ambition. — Write, giving details of previous experience, to Box V.2613, "The Contract Journal."

ENGINEER-ESTIMATOR REQUIRED for small but expanding civil engineering contractors in South-East. This appointment would mean that the applicant would be responsible only to the contracts manager, and is an excellent opportunity for a young, live man. Experience desirable in road and sewer construction, also in sewage disposal, etc.—Write, stating age, training and experience, to Box V.2618, "The Contract Journal."

INSPECTORS OF WORKS REQUIRED to supervise civil engineering construction work overseas. Experience in reinforced concrete and general civil engineering work. Applications required now.—Write, stating age and experience, to Box V.2616, "The Contract Journal."

ROAD CONTRACTORS REQUIRE experienced ESTIMATOR-AGENT to establish and run a section to deal with small general roadworks in Metropolitan area. Permanent, pensionable position. Car provided. Full details in confidence.—Write Box V.2617, "The Contract Journal."

MEARS BROS. (CONTRACTORS), LTD., Civil Engineering contractors, REQUIRE CASHIER/COST CLERK for office work in the Salisbury area. Applicants should preferably have had previous experience in general contractors' administration.—Apply in first instance, in own handwriting, to Personnel Manager, Mears Bros. (Contractors), Ltd., 154 Sidenham Road, S.E.26.

VAL DE TRAVERS ASPHALTE, LTD., requires an experienced ROLLED ASPHALT PLANT SUPERINTENDENT for the Midlands area. — Apply Area Manager, 5 Lower Temple Street, Birmingham.

URBAN DISTRICT COUNCIL OF CORBY.

ROCKINGHAM ROAD SITE NO. 2.

CONSTRUCTION OF ROADS AND SEWERS, AND ADVANCE SITE PREPARATION.

TENDERS are invited for the CONSTRUCTION of approx. 800 sq. yd. of FLEXIBLE CARRIAGEWAY; 260 lin. yd. of KERBING, and 500 lin. yd. of FOUL and SURFACE WATER SEWERS, together with other ancillary works.

Forms of Tender, Specification and Bills of Quantities may be obtained from the undersigned on payment of a deposit of One Pound (cheques being made payable to the Urban District Council of Corby). General Conditions of Contract and Drawings may be inspected at the Office of the Engineer and Surveyor, Corporation Street, Corby.

Completed Tenders, in the endorsed envelope provided, together with all other Contract documents, should be returned to the undersigned not later than the First Post on 6th OCTOBER, 1960. The Council do not bind themselves to accept the lowest or any Tender.

G. B. BLACKALL,
Clerk of the Council.

Council Offices,
Corby, Northants.
29th August, 1960.

CUCKFIELD URBAN DISTRICT COUNCIL.

SUPPLY OF TRACTOR-MOUNTED EXCAVATOR/LOADER.

The Council invite TENDERS for the SUPPLY and DELIVERY of One DIESEL-ENGINE TRACTOR-MOUNTED EXCAVATOR/LOADER for use in connection with the disposal of refuse on a controlled tip. Forms of Tender and further particulars of the Council's requirements will be available at the Office of the Surveyor to the Council on application.

Tenders, sealed in plain envelopes to be provided, and endorsed "Excavator/Loader," but bearing no name or mark of the sender, must be delivered to the undersigned at the address below not later than Noon on SATURDAY, the 17th September, 1960. The Council do not bind themselves to accept the lowest or any Tender, and a Tender submitted otherwise than as directed will be rejected.

J. A. EVANS,
Clerk of the Council.

Oaklands,
Haywards Heath,
Sussex.
29th August, 1960.

TECHNICAL REPRESENTATIVE REQUIRED in connection with hire of large mobile cranes and associated services. Based on Rotherham, to work North Midlands area. Modern car provided. Heavy mechanical engineering experience essential. Some drawing office work and a successful sales record in similar field desirable.—Write Box V.2612, "The Contract Journal."

CIVIL ENGINEERING contractors on South Coast are expanding and REQUIRE the services of an ESTIMATOR for road and sewer works. He must be experienced in taking-off and pricing from drawings and specifications, preparing interim certificates and final accounts. He must have a knowledge of the capabilities and output of modern earth-moving equipment, etc.—Reply in own handwriting, enclosing a photograph of the applicant with a salary range of £900-£1,500.—Write Box V.2611, "The Contract Journal."

JOHN LAING AND SON, LTD., REQUIRE ASSISTANT BUYERS at their head and regional offices. Applicants should have had some experience of buying or as builders' assistants, and must be able to take-off quantities. Applications welcome from men studying for H.N.C., L.I.O.B. or A.I.Q.S., or those who have already qualified. Good prospects within the organisation, including pension scheme and other progressive benefits.—Applications, in writing, to Personnel Manager (A.B.17), John Laing and Son, Ltd., London, N.W.7.

CIVIL ENGINEERS.—SUB-AGENTS, SECTION ENGINEERS AND SETTING-OUT ENGINEERS with previous contract experience urgently REQUIRED for civil engineering and building work in Scotland. Good prospects for Engineers with initiative and drive. Pension schemes: life assurance.—Apply in writing, stating age, previous experience, qualifications, and salary required, to ROBERT M. DOUGLAS (CONTRACTORS), LTD., 395 George Road, Erdington, Birmingham, 23.

CIVIL ENGINEERS with over 12 months' site experience are invited to apply for one or two vacancies which are available with well-known London-based contractor carrying out works near Liverpool and Glasgow. These are permanent appointments with an expanding group of companies, giving opportunity for overseas service when ability is proven.—Write Box C/1782 LPE, Romano House, 399/401 Strand, W.C.2.

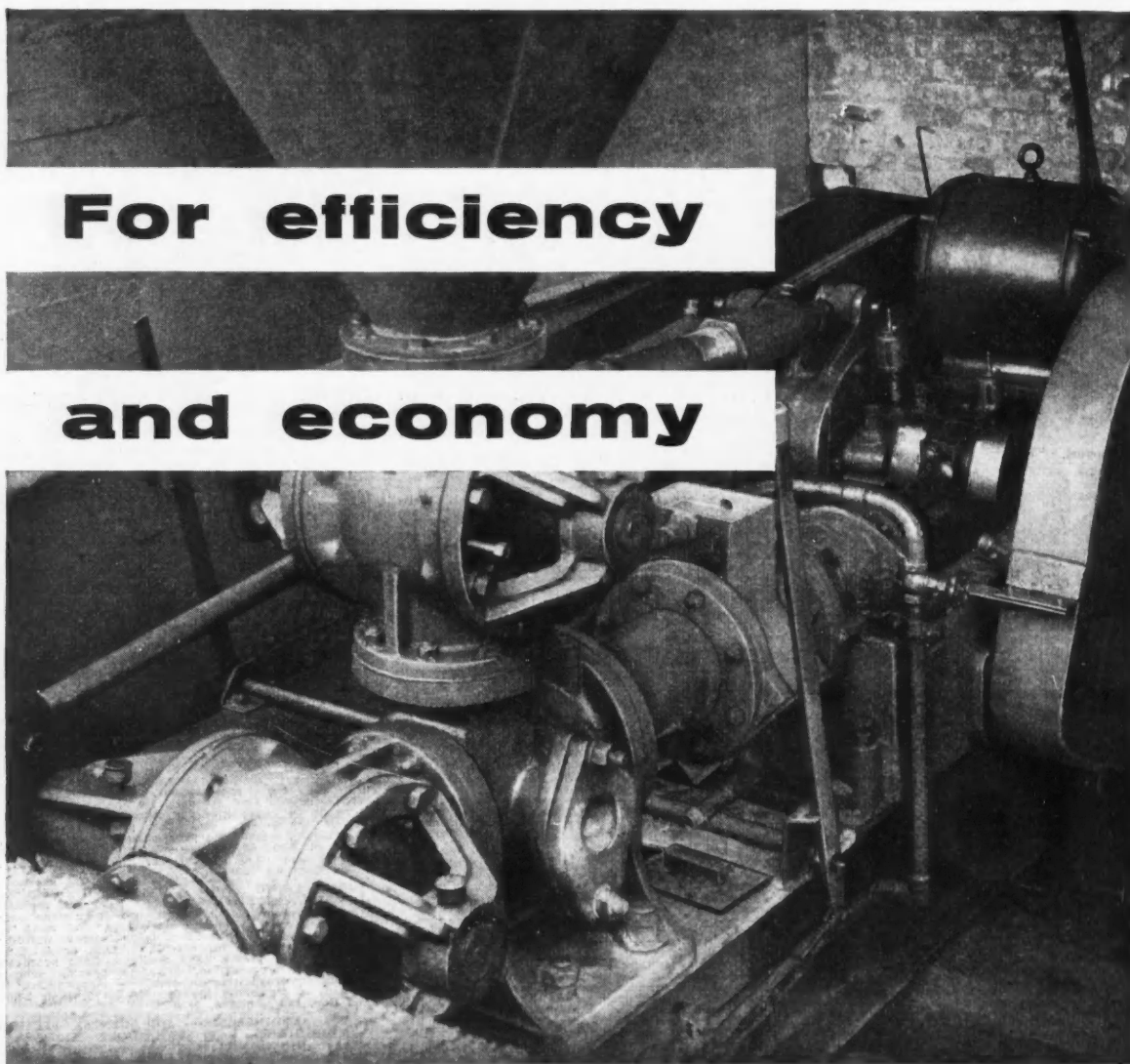
CIVIL ENGINEER REQUIRED for roadworks and general civil engineering contracts in the Potteries area. This appointment provides an excellent opportunity for an experienced and capable man. Commencing salary £1,200/£1,500 p.a. Bonus and pension scheme. Car provided.—Written applications, in confidence, giving full details of experience, qualifications (if any), to Box V.2624, "The Contract Journal."

BUYER REQUIRED for building and civil engineering contractors, Birmingham. Must be able to take-off and be fully conversant with all trades. Permanent position for right applicant. £850 per year.—Write Box V.2621, "The Contract Journal."

SENIOR ACCOUNTS CLERK for building and civil engineering contractors, Birmingham. Must be competent bookkeeper. Good wages and permanent position for right man.—Write Box V.2622, "The Contract Journal."

YOUNG ENGINEER WANTED for setting-out and assist control on road and sewer contract in Glamorgan. Six months' contract, possible permanency.—D. BENNETT, LTD., Wallington, Fareham, Hampshire.

SENIOR ESTIMATOR.—This appointment in the civil engineering company of the RICHARD COSTANTINI GROUP will involve undertaking complete responsibility for tenders for major contracts in the U.K. and overseas. Candidates, preferably qualified Civil Engineers, must have spent the past five years estimating for heavy civil engineering works, and previously have held senior posts on site with civil engineering contractors.—Please address applications to Senior Personnel Officer, 111 Westminster Bridge Road, London, S.E.1.



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THE CONTRACT JOURNAL

INCORPORATING
THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

THE CONTRACT JOURNAL

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and
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LAWRENCE MCCARTHY

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Advertisement rates may be obtained on application to R. Binfield, Advertisement Manager.

CARAVAN SITES: POWERS FOR LOCAL AUTHORITIES

IT has been estimated that some 150,000 people in this country are at present living in caravans and the substantial increase in caravan-living in recent years shows no sign of slackening.

Not all the caravans at present used as homes are suitable to live in and many of the sites, irrespective of whether they are technically in breach of the law, are badly located, ill-equipped and ill-run. With the coming into effect this week of the Caravan Sites and Control of Development Act, 1960, however, this situation should change for the Act confers on local authorities effective powers for controlling caravan sites.

In connection with the Act, the Minister of Housing and Local Government has offered some useful guidance to local authorities. He considers that the aim should be to secure that all caravan sites, whether residential or holiday sites, are properly equipped and run and that they are not allowed in the wrong places but are allowed in acceptable places. The Minister has also told the authorities that planning permission should not be withheld on principle but only where there is some definite planning objection. He has also said that permission should be given on a long-term or permanent basis unless there is some definite reason against this and that where sites have to be run down or numbers have to be reduced this should be done with due regard to avoidance of hardship.

In future, caravan sites will require to be licensed. Existing sites which have specific planning permission must be granted licences but the licensing authority will be able to attach conditions to the licence. In doing so, they must have regard to model standards prescribed by the Minister. Applications for licences for existing sites which do not have specific planning permission will be referred to the local planning authority to determine the planning status of the site and what ought to be done about it.

The establishment of a new site will require, first, planning permission and second, a licence. Close and harmonious co-operation between planning and licensing authorities in dealing with applications in respect of both existing and new sites is obviously of considerable importance.

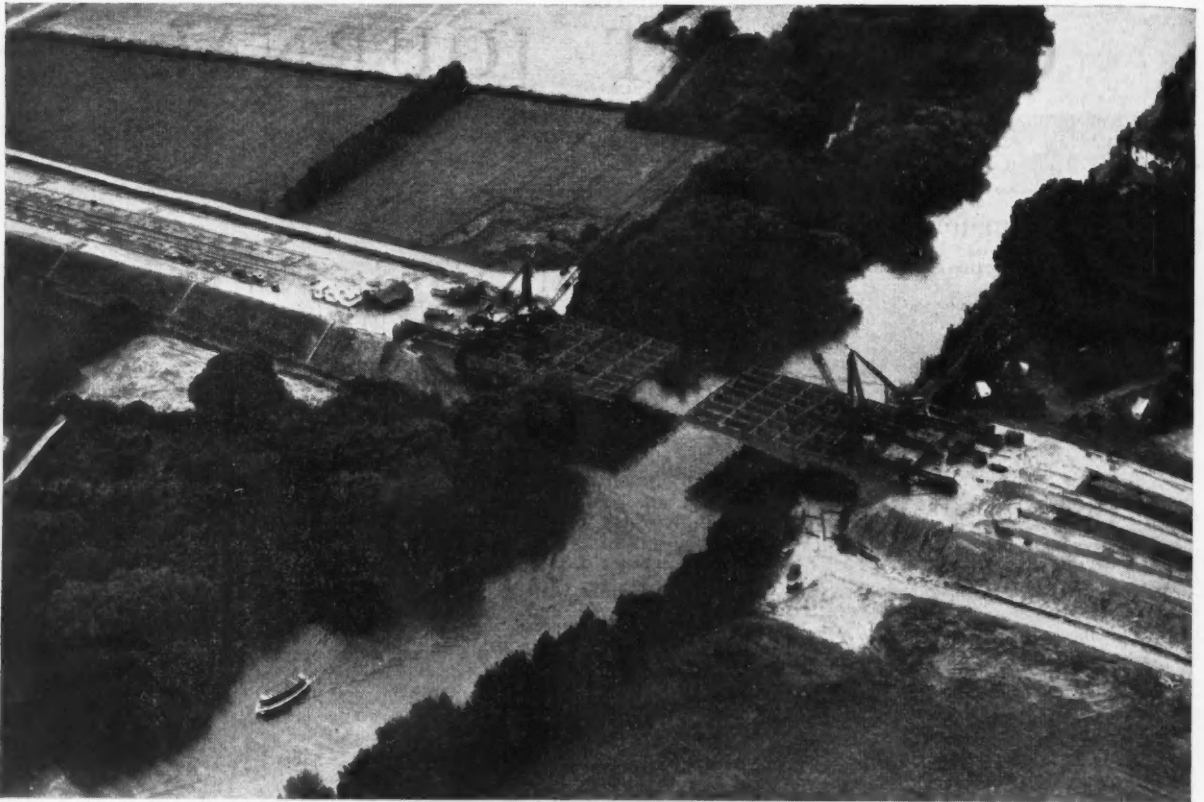
In general, local authorities disapprove of 'caravan-living in principle. It seems to them a backward step in the general march toward better housing and environmental welfare and a threat to the success of their plans for the balanced development and use of land available to the communities they serve. Their disapproval has been reinforced by their consciousness of the physical and legal limitations on their ability to prevent an unplanned growth of residential caravanning in bad locations and poor conditions, and their knowledge that on many sites poor conditions do in fact exist.

Now local authorities have the powers to deal with these undesirable features. Caravan-living is bound to continue and authorities should accept the situation, and operate the new Act sympathetically as indicated by the Minister.

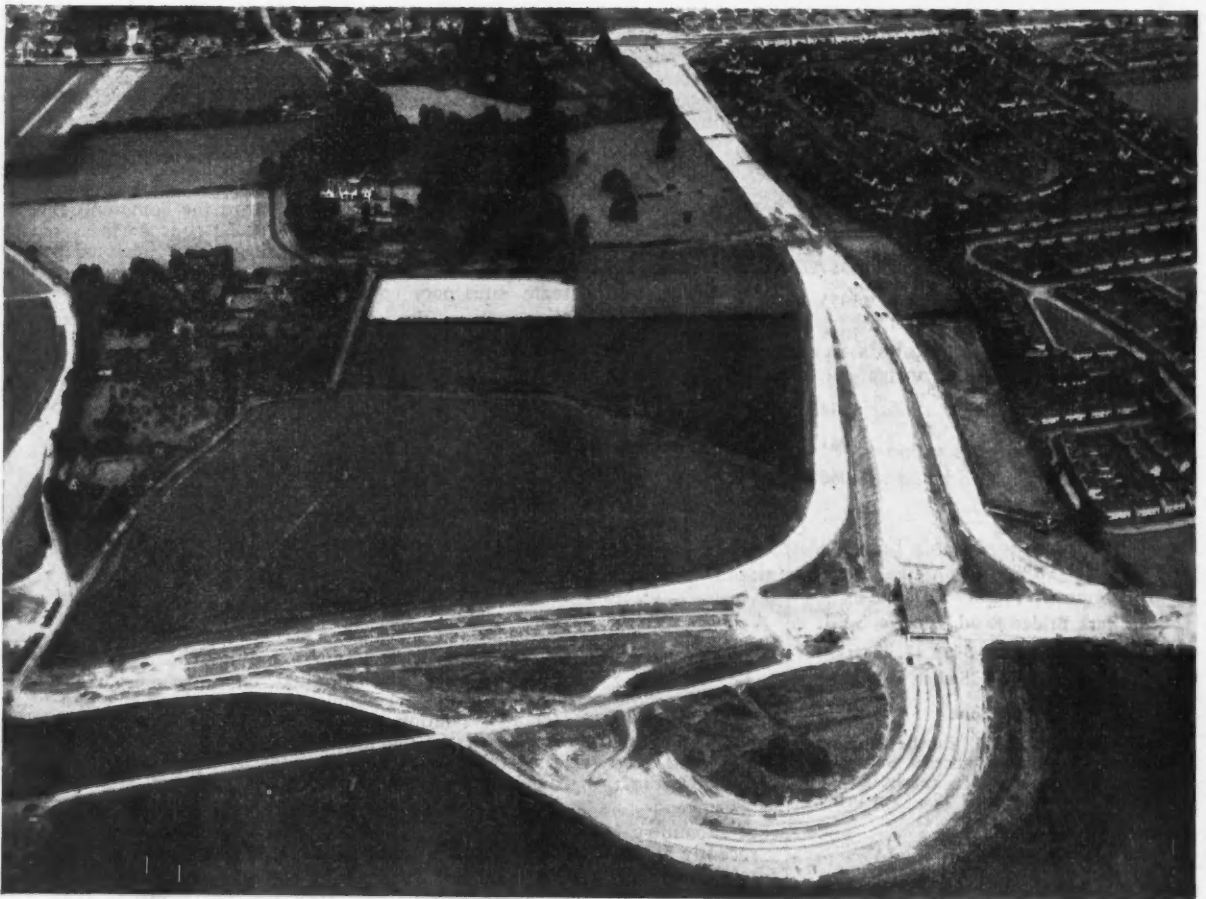
Improving Communications in the Colonies

LAST year this country approved grants amounting to £10,624,502 for improving communications in the colonies. Of this amount £6,569,631 was for roads, £3,308,238 for the development of ports, harbours and water transport, £389,355 for civil aviation and £337,500 for railways. Altogether, Britain provided a record sum of £25½m. for development and welfare schemes to benefit her overseas territories, communications accounting for the largest total of grants approved for development schemes.

The vital importance of good communications in the economic development of a country has thus not been overlooked, as was seemingly the case until recently in the United Kingdom. These grants not only help the colonial territories but also provide work for civil engineers and the construction industry in this country, at the same time affording them valuable experience of overseas conditions.



The Thames bridge, near Bray, prior to the placing of the last girders



Aerial view of Huntercombe spur under construction

CONSTRUCTION OF MAIDENHEAD BY-PASS TO MOTORWAY STANDARDS

BY the spring of next year both the Buckinghamshire and Berkshire sections of the Maidenhead By-pass will be opened to traffic. Despite the recent rainfalls work has progressed rapidly, both contracts being well up to schedule, and the decking is now being placed on the new Thames Bridge near Bray which links the two sections.

The by-pass, which stretches for approximately seven miles to the south of Maidenhead, will later be extended a further seven miles to by-pass the town of Slough. Ultimately it will form a link in the London-South Wales Motorway and is therefore being built to motorway standards.

The road commences in Berkshire on the Bath Road (A.4) at Maidenhead Thicket where a roundabout with a 240ft. diameter island is being constructed two miles west of the town centre and then passes south of the town to cross the River Thames. The portion east of the river is in Buckinghamshire and rejoins the Bath Road nearly three miles east of the town centre at another roundabout near Huntercombe Lane.

Generally, the road layout consists of dual carriageways, each 24ft. wide and edged on both sides by marginal strips 1ft. wide, a centre reservation 13ft. wide between carriageways, and hard shoulders along the outer sides of mostly 10ft. width reduced to 8ft. across bridges. The width of verges along the back of the shoulders varies from 2ft. 6in. to 4ft. 6in. Except at bridges the overall width lies between 90ft. and 94ft.

The marginal strips are set level with the road surface and surface water flows across the carriageways and shoulders to either a filter drain along the verge, or across the verge and into a ditch at the toe of embankments. There is a filter drain all along the centre reservation to collect surface water both from the reservation and from the super-elevated carriageway on curves. Manholes on the filter drains discharge transversely at intervals either into ditches or into soakaways where natural outfalls are not available.

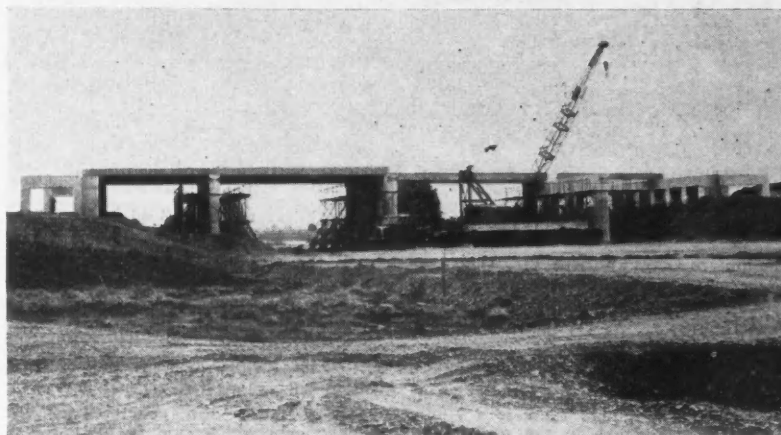
All curves have spiral transitions for a design speed of 70 m.p.h.

The layout of slip roads at junctions comprises a carriageway from 24ft. to 28ft. wide edged by marginal strips 1ft. wide, and verges each side from 9ft. to 11ft. wide. The minimum radius is 180ft. with spiral transitions. Adjacent to junctions, 12ft. wide acceleration and deceleration

lanes are provided for lengths of 800ft. and 700ft. respectively.

The structure of the carriageways consists of two course hot-rolled asphalt 4in. thick, laid on 8in. of lean concrete base, with a sub-base of lean concrete 6in. thick. The hard shoulders consist of 2in. thick dense tar surfacing dressed with tar and chippings laid on 9in. thick lean concrete base, with a sub-base of lean concrete 6in. thick. The marginal strips consist generally of 12in. by 6in. precast concrete channel

1940, after which work was suspended. When work was resumed in 1958, the opportunity was taken of redesigning the superstructure to take advantage of higher working stresses and modern fabrication methods. In particular extensive use has been made of shop-welded and site-welded high-tensile steels. Single web plate girders have been used as against the original box girders and in all a saving of 950 tons of steelwork has been made on the original design.



Beam launching to Huntercombe spur bridge. The open abutments can be seen on the right

blocks laid flush with the carriageway surface.

New Thames Bridge

The new bridge near Bray which will carry the motorway over the River Thames is thought to have the longest all-welded steel span in this country. Designed for the Ministry of Transport by Freeman, Fox and Partners, consulting engineers, it is expected to be completed this December. The last girder was recently placed in position and decking work is starting. Horseley Bridge and Thomas Piggott, Ltd., Tipton, are the main contractors, and the principal sub-contractors are Carter Horseley (Engineers), Ltd., for steelwork erection and Higgs and Hill, Ltd., for concreting the deck. The resident engineer is Mr. K. Goodearl.

The foundations and abutments of the bridge were substantially completed in

Two 24ft. carriageways will be carried by the bridge, together with two 6ft. wide cycle tracks and two footpaths, each 5ft. 6in. wide. The carriageways have 1ft. marginal strips along each edge and are separated by a 13ft. wide central reservation. The cycle tracks are separated from the carriageways by 6ft. wide verges accommodating unclimbable fencing and guard rails. Overall width of the bridge deck is 100ft., substantial steel parapets being provided on each side.

The bridge has a central span of 270ft. and two side spans, each of 38ft. The superstructure consists of eight all-welded high-tensile steel girders, continuous over the supports and anchored at their extremities inside the abutments by means of hinged steel tension links. The girders are interconnected by welded mild steel cross frames bolted in position using high-strength friction-grip bolts.

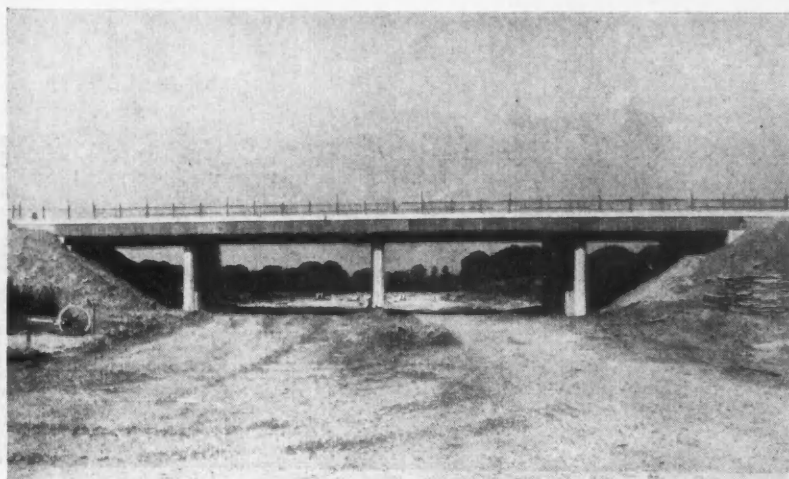
The deck consists of a reinforced concrete slab 8½in. thick, cast in situ on top of the upper flanges of the main girders and made to act in combination with them by the provision of suitable shear connectors welded at intervals along their length. The slab is continuous between abutments, expansion joints being provided at each end, and is waterproofed throughout by means of mastic asphalt.

The cantilevered method of construction has been used so that no obstruction has been caused to river traffic. Ten-ton derricks with 120ft. jibs were employed, being moved forward as construction neared the centre. The maximum lift was on the side closing girder which weighed 8 tons.

Buckinghamshire Section

East of the Thames Bridge the by-pass is in Buckinghamshire and responsibility for its design and construction rests with the County Council as agent authority to the Ministry of Transport. All the road-works and bridges have been designed in the office of the county surveyor, Mr. E. H. Frankland, the resident engineer being Mr. D. Heath.

The contractors for the Buckinghamshire



Monkey Island Lane bridge



View of the road looking from Windsor Road bridge to Ascot Road bridge

section are Higgs and Hill, Ltd., their construction team on this job, under site agent, Mr. A. Gage, being brought direct from a rocket range scheme in the Hebrides.

This section carries the twin 24ft. carriageways from the Thames Bridge to a point south of Cippenham Estate about two miles distant, and there is a $\frac{1}{2}$ -mile ring at Huntercombe to the roundabout intersection with the A.4. Where the bypass turns north to rejoin A.4 there is a two-level junction so that when the bypass is extended beyond Slough the through traffic will not be impeded by traffic joining or leaving the motorway on this spur.

Higgs and Hill were meant to start work on their contract in May, 1959, but planning appeals against the establishment of borrow pits approximately $2\frac{1}{2}$ miles from the site at Poplar Farm, Taplow, delayed the beginning until September. However, the work has progressed at a rapid rate, general filling was proceeded with throughout the winter months, and completion is expected in April next year.

There are two borrow pits at Poplar Farm and to date 400,000 cu. yd. of fill for the embankments has been extracted

from one and 90,000 cu. yd. from the other. A fleet of 45 7-ton trucks has been used to transport the fill, the size of truck being governed by the access to the job, along which are low railway bridges. The maximum haul in one week was 30,000 cu. yd. Feeding the trucks are two 28 RB's, one 22 RB and a Lima 802.

All the dry lean concrete for the Buckinghamshire section is produced at batching plants, one at each end of the scheme and both of 1 cu. yd. capacity. Four mobile Benford 18/12 mixers are used where required for making the structural concrete. All paving is laid by a Blaw Knox PF 90 paver.

There are two flyovers in this section carrying diversion roads over the motorway—one at Marsh Lane and one at Huntercombe Lane—in addition to the flyover which carries the Huntercombe spur over the motorway. The Marsh Lane structure comprises two spans of 30ft. and two of 48ft., and the Huntercombe Lane has two at 36ft., one at 50ft. and one at 64ft. Both structures are similar in design, with reinforced concrete columns on strip foundations bearing on gravel. They are designed to Ministry of Transport normal loading and have pre-tensioned beams on the long

line system with transverse mild steel in the in-situ decking. Abutments are of the open type.

The Huntercombe Spur bridge is designed to carry the abnormal load of 180 tons. It comprises two spans at 30ft., one at 45ft. 6in., and one at 57ft. 6in. The two centre spans are post-tensioned by the P.S.C. mono-wire system and transverse stressing is by the Freyssinet post-tensioning.

All three bridges have the piers and cantilever of the deck finished in Cornish Granite aggregate and white cement and the piers are bush hammered. Wrought-iron railings are used with Burma Teak handrailing.

Completing the structures on the Berkshire section is a footbridge over the Huntercombe Spur. This is an in-situ reinforced concrete structure with a 1-in-10 ramp at either approach in lieu of stairs to facilitate the movement of cyclists.

Also on this side of the Thames there are three culverts of reinforced concrete box section construction. Two are under construction and one is completed. They are sited at Lots Hole, Lake End and Roundmoor. Work at Lots Hole and Lake End was complicated by the discovery of large pockets of peat which had to be excavated before construction could proceed. In these areas the base concrete was placed by tremie pipe under water.

Berkshire Section

The length in Berkshire is four miles, and in addition there is a short diversion of the Maidenhead-Henley trunk road running northwards from the roundabout at Maidenhead Thicket for $\frac{1}{4}$ -mile. The works also include the realignment and regrading of eight side roads extending in length to just over five miles.

Berkshire C.C. are the agent authority for this section, on which work began in May, 1959. The main contractors are John Laing and Son, Ltd. Scott and Wilson, Kirkpatrick and Partners designed five of the road bridges and a footbridge in this section, while the roadworks and other designs are the responsibility of the county surveyor, Mr. K. P. Brow. The resident engineer is Mr. J. M. Johnstone.

About 300,000 cu. yd. of imported granular filling is being obtained from two gravel pits adjoining the road, and about 110,000 cu. yd. of excavation is available as filling.

The six bridges designed by the consulting engineers are grouped into three types: (1) the Ascot Road, Shoppenhangers Road and Monkey Island Lane overbridges which carry side roads over the motorway;

(Concluded on page 1044)



A finisher laying dry-lean to the sub-base course (Bucks. section). Compaction is by a 10-ton tandem roller and vibrating roller

ENGLISH ELECTRIC HOUSE

**£1¼m. Multi-storey Offices
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MANY electronic-control features are incorporated in English Electric House, the English Electric Group's recently completed headquarters on the former site of the Gaiety Theatre in the Strand, London.

Joined to Marconi House, which will now be known as the Marconi Wing, the new building provides a total floor area of some 200,000 sq. ft., and from lower basement to roof contains 14 floors. The height from pavement level to the observation room roof on the tenth floor is 118ft.

The building is faced in Portland stone treated with silicones to eliminate cleaning costs, and the window casements throughout are in aluminium alloy. Double casements are provided up to fourth floor level to reduce traffic noise.

Main Entrance Facade

A feature of the design is the main entrance facade, from which two wings extend, 90ft. along the Strand and 120ft. along Aldwych, joining with the Marconi Wing to enclose a central courtyard. The doors are deeply cut panelled steel, and on either side above them are two 18ft. high bronze figures by Sir Charles Wheeler, president of the Royal Academy. The stainless steel doors and the central feature

with its aluminium windows separated by faceted panels of aluminium reach 80ft. up from the pavement to the canopy. An electronic device automatically opens and shuts the plate-glass doors leading into the entrance hall as people walk in and out.

The inner courtyard has been lined in honey-coloured frost-proof matt glazed tiles, toning with the Portland stone, with the result that all the inner offices have adequate daylight, increased by the reflection of light off the walls. Taken from the dome of the old Gaiety Theatre, the famous Angel has been restored and silvered, and stands in the centre of a fountain in the courtyard garden. The garden is paved and the fountain has been lined with blue mosaic.

Layout of the first to sixth floor office accommodation is repetitive, having rooms on either side of a central corridor. Office accommodation for 750 staff is provided, with conference rooms and cloakrooms on each floor, and the boardroom suite on



The main entrance facade

the third floor. Office space has been built with demountable partition walls to allow the layout to be altered at any time, and a colour scheme of pale grey walls, cream ceilings and light blue linoleum-tiled floors has been chosen. Woodwork in the offices, corridors, and landings is a light brown mahogany.

On the tenth floor of the building is an observation room with a plate glass window along the entire length of one wall. In conjunction with the 35ft. aerial mast on the roof, the room is equipped with power supply and cable ducting, and can be connected to television receivers at any point in the building or with the national networks. It will mainly be used as a demonstration room for Marconi International Marine equipments.

The basement is almost exclusively used as a garage for 35-40 cars with an entrance ramp at street level on the Aldwych side. A service entrance joins English Electric House with the existing kitchens of the Marconi Wing. Next to the garage entrance is a turntable for delivery vans.

Construction Details

Carried on a reinforced concrete raft, contained in a cantilever reinforced concrete wall, the building is framed in structural steel, with internal walls of brick and suspended floors of reinforced concrete, constructed with hollow pots to give a flush ceiling, free of hanging beams. The heating coils were cast into these pots to give space heating at ceiling level with individual control switches in every room.

Work began on the project in January, 1958. The initial task was to take bearings to a depth of 40ft. below pavement level, to check the contents of the sub-soil and to ensure that none of the excavations would foul L.C.C. subway services.

Foundations were laid 35ft. below ground level after some 15,380 cu. yd. of soil had been excavated. It was regarded as essential to treat the foundations inside and out to make them watertight.

As the sub-basement was to house all the plant for the mechanical services to English Electric House and the Marconi Wing, before work could begin on the steel frame for the building, the three huge



View of the main hall

thermal storage vessels had to be lowered 30ft. into the basement, with the minimum disruption to traffic. Three mobile cranes were used to hoist the tanks simultaneously and place them in the basement, and they were later moved into their permanent position by trolley. A refrigerating plant had also to be set up in the sub-basement to provide the ventilating system throughout the building.

All the plant and materials used for the new building had to be stored and used within the building area itself, and to make this possible a 160ft. tower crane with an 84ft. jib was put up in the centre of the site. With it, materials were brought up from the street and taken to any point in the building where they were needed. This called for unusual accuracy from the crane operator, as the area in which he could manoeuvre became more and more confined within the intricate network of steel beams and columns, which formed the frame of the new block.

Air Conditioning

An air-conditioning system is installed up to the fourth floor, and is provided by a number of plants serving separate sections of the building.

One plant serves the Aldwych side and one the Strand side, to allow for the movement of the sun round the building and consequent changes in temperature. A third plant goes to the exhibition hall which may sometimes be crowded and at others not. Separate ventilation plants are also installed in the basement garage, the boardroom area and the internal lavatories.

Fresh air for all the air-conditioning plants is drawn from a central area through a common intake chamber in the lower basement plant room. This common chamber serves the filtration sections of the individual plants.

The type of filter used is a comparatively new development operating with two spools, the clean blanket being provided on one spool and wound across the air passage on to the other, and is controlled by a timing device. Warning devices are provided to indicate when the charged spool is exhausted, so that maintenance routines are simplified.

From the filter sections the cleaned air is passed to cooler batteries supplied with chilled water from the central refrigeration system. These batteries will serve to cool the air in summer to a pre-determined temperature. Similarly heater batteries, provided with hot water from the main boiler plant, will serve to warm the air to a pre-determined temperature in winter.

From the main fans the conditioned air is distributed to the various sections of the building, through insulated ductwork rising in shafts behind the lifts. The high velocity principle has been adopted for the air distribution by high pressure fans specially treated to deaden sound.

An air distributing unit is fitted in each room above the door, or over the centre of the bay in a double room. At the room units, the primary supply of conditioned air is mixed with room air to provide an output double that of the primary quantity circulated. This effect is achieved by the introduction of a venturi within the distributing box which induces room air into the box before it is dispersed.

Air from each of the occupied rooms will be extracted into the corridor ceiling void and conveyed back to the basement plant chamber where it will be in part recirculated.

To provide chilled water for the cooling batteries refrigerating plant with a total of 130-h.p. has been installed. This con-

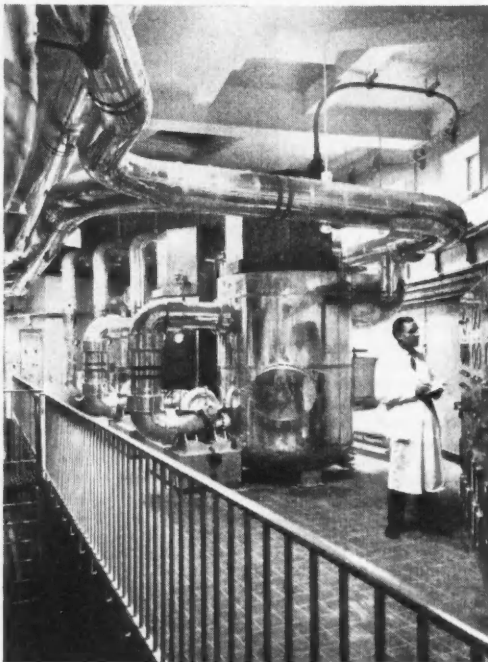
sists of two packaged units fitted in the sub-basement plant room working in conjunction with a cooling tower on the ninth floor.

The extract ventilation systems serving the basement garage, the boardroom suite and the internal lavatories, are of the conventional type.

Electrical Installation

Lighting in all office areas is provided by semi-decorative fluorescent lighting fittings fixed close to the ceiling which provide a lighting intensity in accordance with present day requirements. The lift halls are illuminated by cold cathode tubing concealed within the plaster cornice.

In all plant rooms, corridors and general circulation spaces an emergency lighting



The plant room in lower basement

system is provided which automatically comes into operation on failure of the mains supply. In addition, facilities are provided so that the emergency lighting points can be used at night for pilot lighting.

A fire alarm system has been installed with pushes and alarm bells in the corridors and at the head of the staircase on all floors. Each floor is zoned to a central indicator panel, so that as soon as an alarm is given, the area from which the alarm came is recorded.

The building is heated by two 1,200-kVA = 11-kV electrode boilers which are automatically controlled by time switches, the circuit breaker for each boiler being solenoid operated. The emergency lighting battery has been used to provide the D.C. supply for the operation of the circuit breaker solenoid.

A three-compartment underfloor duct system has been provided to carry the cables for telephones and light power supplies on all floors where there are offices. Access to the duct system is through floor boxes sited, in most cases, in the corridors. Each office is provided with a three-compartment wall terminator box, designed in conjunction with the G.P.O., containing the telephone terminal block, 13-A socket outlet and provision for inter office bell connection.

Space heating arrangements take the form of heating panels embedded in the structural ceilings generally, and in the floors of the entrance hall and exhibition hall. Each bay of the building has its own separate embedded panel and this

is controlled in each case by a thermostat and a control valve.

There are four Otis passenger lifts in the main hall, each capable of carrying eight persons at a speed of 500ft. per minute. These go from the basement level to the eighth floor.

The four lifts operate as a group and are automatically controlled to suit the traffic demands as they change during the day. Each lift car is provided with an automatic weighing device which will weigh the passenger load so that the lift operates at near capacity. When this device has operated, the lift will not stop in response to landing calls until the load has been reduced by passengers leaving the car.

The doors of each lift are provided with an electrical device so that should a passenger step into the lift just as the doors are closing the doors will automatically return to the open position.

A separate passenger lift for "Fireman's" use is provided. This lift operates at 300ft. per minute and can, normally, be used as an additional passenger lift.

A 1-ton capacity goods lift is also provided which travels at 100ft. per minute, between the lower basement and ground floor, mezzanine, and a mail lift goes up to the seventh floor.

About 1,200 tons of structural steel were used for the superstructure of the building, and 3,000 cu. yd. of concrete with 160 tons of reinforcement. Foundations accounted for 17,000 cu. yd. of excavation, and 4,400 cu. yd. of poured concrete with 300 tons of reinforcement. The total cost of the building, including adaptations to Marconi House, was £14m.

Consultants and Contractors

The architects were Adams, Holden and Pearson; the consulting engineers, Oscar Faber and Partners; and the quantity surveyors, Widnell and Trollope. Taylor Woodrow Construction, Ltd., were the main contractors.

VOLTA RIVER TENDERERS TO RECEIVE GRANT

Applications to tender, which must be received by September 22, are being invited by the Government of Ghana in connection with the civil engineering works, to include a dam and power house, involved in the River Volta hydro-electric scheme.

A feature of the tendering procedure will be the granting of financial assistance, up to £G2,500, to a limited number of approved contractors for the purpose of encouraging a proper study of the project site. This grant will be made at the time a duly completed tender is received from the applicant, but will not be given to the successful tenderer.

The Government of Ghana emphasise that it is not their intention that tendering for the scheme should be restricted to contractors approved for the grant, the invitation to tender being an open one. Applications, with details of resources and experience, should be sent to the Principal Secretary, Volta River Project Secretariat, P.O. Box M.77, Accra, Ghana.

FURTHER LOCH AWE CONTRACT

The Mitchell Construction Co., Ltd., Peterborough, have been awarded a further contract in connection with the North of Scotland Hydro-Electric Board's Loch Awe project.

The new contract involves the construction of foundations, roof, tail-race, transformer compound and other works for the Inverawe power station.

In April Mitchells were awarded a contract for the construction of a barrage, intake, small power station and other works.

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THE TIMES FRIDAY FEBRUARY 26 1960

CUT IN BUILDING ACCIDENTS "AN URGENT NEED"

CRITICISM OF LACK OF PRECAUTIONS

That an "urgent and immediate need" exists for an improvement in the accident record of the building and civil engineering industries is the main conclusion in a Ministry of Labour report on safety and health in the industries, published yesterday.

In an introduction to the report, Mr. T. W. McCullough, Chief Inspector of Factories, writes: "There are still far too many accidents on construction work and employers and operatives alike must continue to use every endeavour if real progress is to be made in making the industries safer." The most encouraging development in recent years, Mr. McCullough continues, has been the setting up of a number of safety training centres.

In the years under review, 1954 to 1958, the report itself noted that the number of accidents at building operations had risen from 13,903 in 1954, of which 172 were fatal, to 15,017 in 1958, with 207 fatalities, both figures being the highest recorded. Similarly, the figures at works of engineering construction were 2,172, of which 42 were fatal, in 1954, and had risen to a peak of 2,329 and 51 respectively in 1958.

MANY FALLS

Falls from working places provided the highest number of deaths at building operations. These were usually due either to a lack of guard rails and toe boards, or to working platforms of an inadequate width.

Falls from sloping roofs were due in the main to a lack of roof ladders or to incorrect anchoring, failure to use a proper working platform, and a shortage of protection around the roof at eaves level. Falls on the flat, although not often resulting in serious injury, produced the highest total of falls. Some of these were caused by bad lighting or by moving loads when vision was obstructed.

Referring to the careless handling of explosives in demolition work, the report suggested that the manner in which explosives were used was sometimes "extremely slack."

Standards of welfare varied greatly from site to site and from employer to employer. The report noted that many building sites were poorly equipped with first-aid requisites in contravention of existing regulations. Messroom standards did not appear to have improved greatly.

At some smaller sites they were nothing more than "the most rudimentary shelters." A number of contractors, however, had successfully used mobile trailers as kitchens and canteens before permanent site buildings had been erected.

Report on Safety and Health in the Building and Civil Engineering Industries 1954-1958 (Cmd. 953, Stationery Office, 1s. 6d.).

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A LAWYER CONSIDERS . . .

Withholding a Certificate

AN interesting and important case arising out of the interpretation of the arbitration clause of the I.C.E. General Conditions of Contract has been reported, *A. E. Farr, Ltd. v Ministry of Transport* [(1960) 3 All E.R. 88].

The contract, which incorporated F. Ltd.'s tender, certain drawings, the I.C.E. General Conditions of Contract and the specification and bills of quantities relating to the works, was for the construction of an underpass some 2,300ft. long at the intersection of Western Avenue and Hanger Lane on the London-Fishguard trunk road. The approaches had to be flanked by retaining walls containing the faces exposed by the excavation of the declining carriageways; these walls had to be built before the core of the excavation was extracted and, to enable this work to proceed, a trench had to be dug along the line of each retaining wall of a width to contain not only the wall but a sufficient working space on at least one side of the intended retaining wall to enable the contractor to erect the walls. Only when these walls were complete could the excavations begin.

The dispute in this case arose from the question of payment by the Ministry for so much of the trenching as had been necessary to provide not the space for the walls but the necessary working space. The tender contained certain clauses called General Directions and the learned judge said that their effect was that the price at which the contractor tendered for the contract would not necessarily be the contract price of the work since the tender was based on quantities which were not to be treated as final. Moreover, under Clause 16 headed "Earthworks" it was provided that "the measurement of excavation in pit or trench for the structure shall, unless otherwise stated be the net plan area of the permanent work multiplied by the depth measured from the mean ground level at the top of the pit or trench down to the authorised bottom; any additional excavation which may be required for working spaces, etc., will be paid for under separate items, the measurement being the sum of the areas of the sides of the excavation based on the outline of the net plan area. Rates for working space shall be inclusive of all consequent refilling. In all other cases the measurement of excavated material shall be the volume of the said material in the ground before being executed." So excavation for the structure was normally to be priced and paid for on the basis of the cubic capacity of the relevant structure; excavation for working space on a different basis, measured by the area of the sides of the excavation. Among the items there was none relating to excavating working space.

Among the General Conditions the learned judge referred to the following which were relevant in that they related to certification by the engineer. Clause 6 allowing the engineer to certify payment of additional sums to the contractor as a result of instructions necessary to solve some ambiguity or discrepancy in the contract documents; Clause 42 requiring the employer to give possession of the site and allowing the engineer to grant an extension of time and recompense for breach by the employer of that obligation by issuing a certificate; Clause 48 requiring the engineer to issue a Certificate of Completion; Clause 60 (1) providing for monthly payments arrived at by the contractor sending to the engineer a statement showing the estimated value of the permanent work executed up to the end of the month and the engineer issuing a certificate; Clause 60 (2) providing for payment of retention; Clause 60 (4) empowering the engineer by any certificate to make any correction or modification in any

previous certificate or to withhold a certificate if the works are not being carried out to his satisfaction. He also referred to Clause 61 which emphasises that no certificate except the Maintenance Certificate issued under Clause 62 shall be deemed to constitute approval of any work or of the accuracy of any claim or demand of the contractor or of additional work.

In October 1958, F. Ltd. wrote to the engineer claiming payment for the excavation of the working space in the trenching for the retaining walls. The engineer replied that as no separate item was included in the bills of quantities for working space required for excavation some additional item should be negotiated. No agreement as to how it should be calculated was, however, reached and the engineer told F. Ltd. that if they did not accept his proposals they must submit a claim at the end of the contract. F. Ltd. then submitted a reasoned and quantified claim for £85,080 which the engineer rejected. F. Ltd. thereupon expressed dissatisfaction to the Ministry and required arbitration under Clause 66. This clause provides that the engineer's decision is final and binding until the completion of the works; if the employer or contractor are dissatisfied with any such decision they can refer the dispute to arbitration but "Such reference except as to the withholding by the engineer of any certificate or the withholding of any portion of the retention under Clause 60 hereof to which the contractor claims to be entitled or as to the exercise of the engineer's power to give a certificate under Clause 63 (1) hereof shall not be opened until after the completion or alleged completion of the works unless with the written consent of the employer and the contractor."

The Ministry contended that this dispute could not be referred to arbitration until the end of the contract. F. Ltd. contended that the dispute related to the withholding of a certificate and so came within the exceptions in Clause 66, quoted above, which permit immediate reference to arbitration. The importance in this case of obtaining a decision on a matter involving so large a sum of money before the completion of the works is obvious; it could create hardship or at the least embarrassment to have to await completion before being paid something at least in respect of a substantial part of the works.

It was first of all contended that the words "under Clause 60 hereof" should be read with the words "withholding by the engineer of any certificate" but the learned judge held that those words should not be read so as to limit the meaning of "withholding by the engineer of any certificate" to a certificate under Clause 60. He felt that such words are unrestricted and are suitable to apply to a withholding of a certificate under Clause 42 or a monthly certificate under Clause 60. Thus any withholding of any certificate is sufficient to allow the exception in Clause 66 to take effect and allow an immediate arbitration.

Having disposed of this argument the question for the learned judge was—has the engineer in this case withheld a certificate? The Ministry argued that the dispute was primarily one as to the interpretation of the contract; in other words the dispute was whether the Ministry was contractually bound to pay anything for the working space excavation and the fact that a certificate had been withheld for such work was merely the result of that dispute and was not, in itself, the dispute.

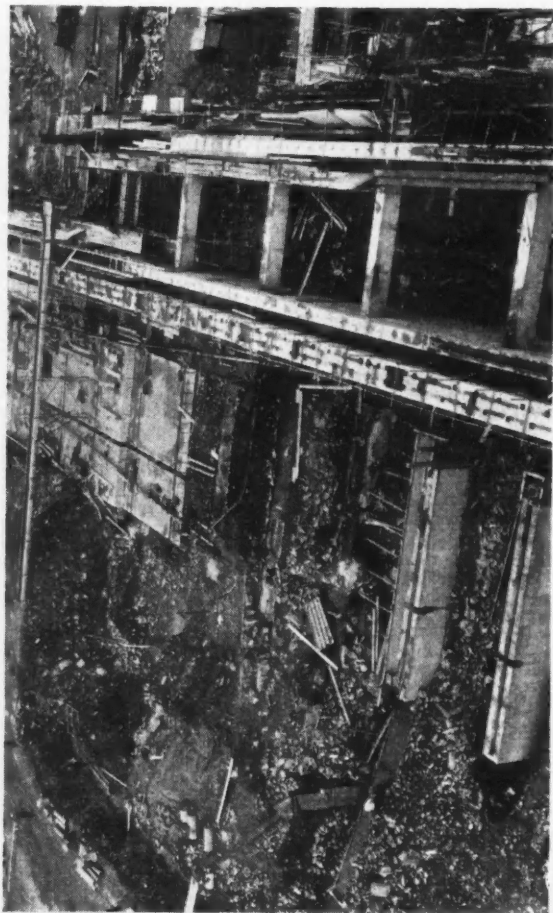
The learned judge did not accept this argument nor did he accept the extreme argument put forward on behalf of F. Ltd. This was to the effect that if the engineer under-certifies for any reason then that

means he has withheld a certificate and the dispute becomes capable of immediate reference to arbitration; but as the judge said, "It would require very clear language to make me accept this contention in relation to a *bona fide* difference of opinion between the engineer and the contractor about measurements. The reason why the monthly payments are to be made on the engineer's certificates is to enable the engineer to say how far the contractor's claims are justified and, if only as a matter of convenience, one would not expect certificates given in good faith to be open to question, particularly having regard to the wide and arbitrary powers conferred on the engineer by other provisions of the contract. The alternative view would open the door to constant references to arbitration during the currency of the contract. Interim certificates of this kind are not final and conclusive determinations of rights, as Clause 60 (4) makes clear, and for this reason also are not likely to have been intended to be the subject-matter of arbitration while the contract is running." In other words inaccurate certification is not non-certification.

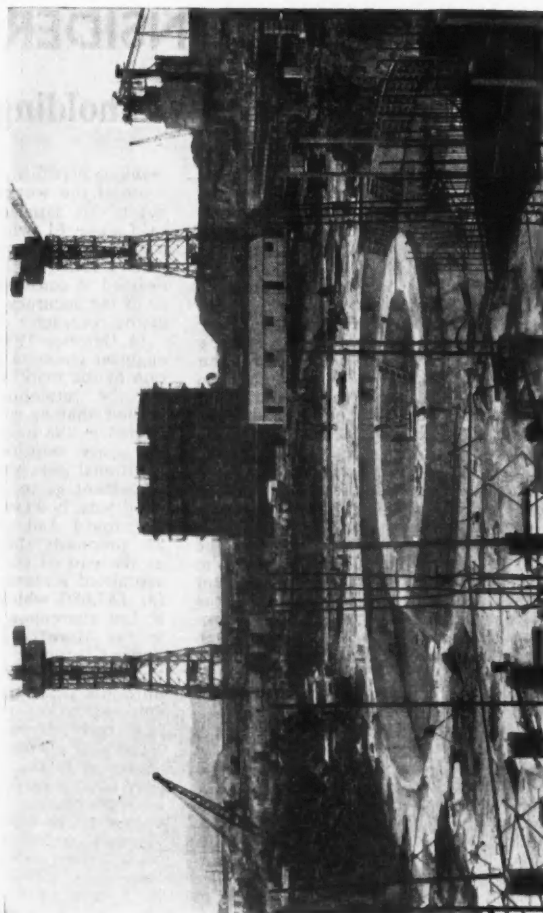
The learned judge adopted the view that only if it was quite clear that the contractor was not entitled to a certificate could the engineer's refusal to give one be held not to amount to a withholding. If it could be argued that there was some apparent right of the contractor to have a certificate issued for some matter and the engineer refused to issue one in respect of that matter then, in regard to that matter, there has been a withholding of a certificate. If the engineer has, however, issued a certificate on that matter then it cannot be argued, simply because the contractor disputes the contents of that certificate, that the engineer has withheld a certificate; arbitration on that dispute must await completion. In the words of Buckley J. "In my judgment, any dispute or difference which relates to something in consequence of which a certificate has been refused, which on one view ought to have been given, is a dispute or difference as to the withholding of that certificate. Whether the certificate has or has not been rightly withheld is a matter to be arbitrated. It cannot be a question for me in the present case whether the contractor's view as to its right to payment on interim certificates for excavation of working space is correct or not. Counsel for the contractor contends that under the contract it should be paid for this work on monthly certificates over and above what it is entitled to be paid on a cubic capacity basis for excavation of the space required for the actual structure. The engineer has refused to certify for this work. This is the subject-matter of the dispute or difference. Rightly or wrongly he has withheld a certificate as far as the excavation of working space is concerned. This has given rise to what is, in my judgment, a dispute or difference as to the withholding by the engineer of a certificate. The fact that in the event the engineer may be held rightly to have withheld the certificate does not make it any less such a dispute. Only if it were clear that the contractor's view could not be upheld could there be said to be no genuine dispute about the withholding of the certificate. I could not take that view in this case."

One point which remains open is whether, if the engineer did not withhold a certificate but issued one for a derisory amount, e.g., in this case for say £20, would that be sufficient to stop an immediate reference by the contractor to arbitration? Without authority on this point one would venture to think that in such a case a court would have little difficulty in deciding that there was bad faith

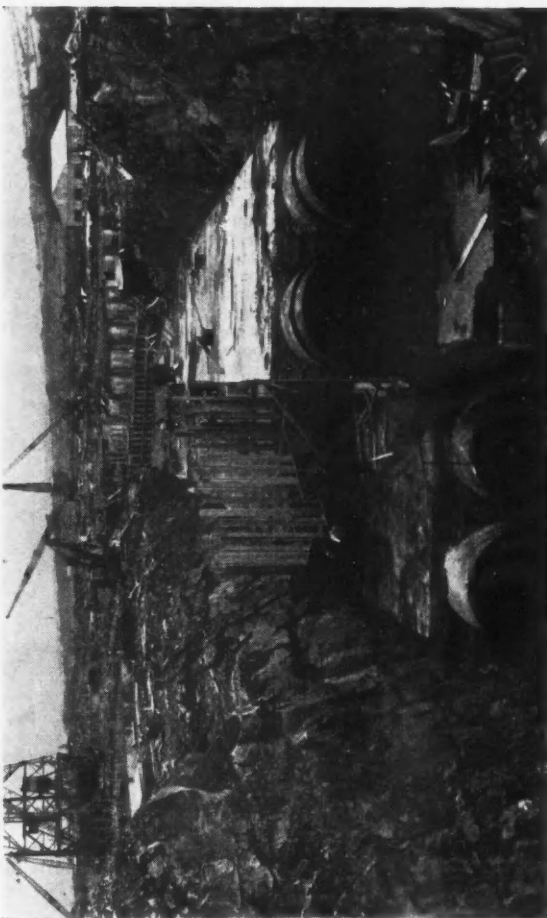
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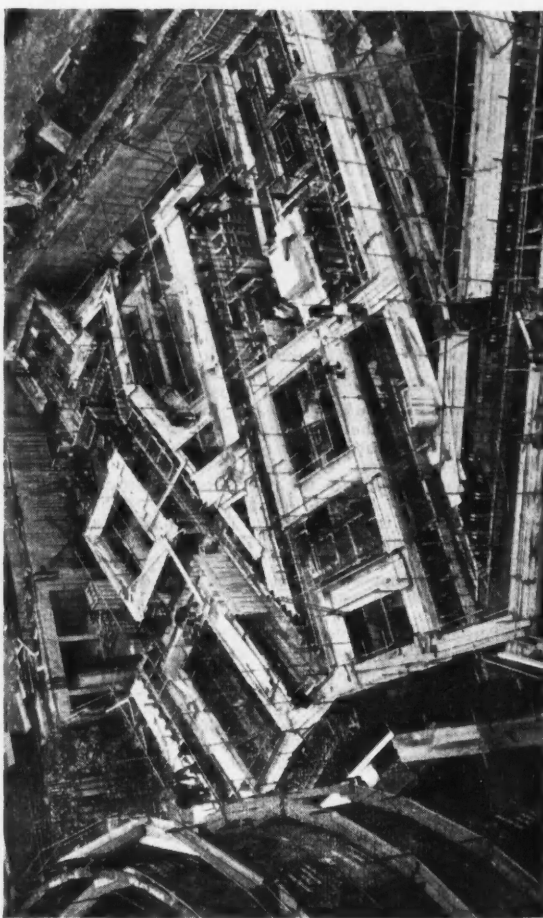
Work on cooling pond and despatch bay foundations



View of Nos. 1 and 2 reactors looking south



C.W. inlet and outlet pipes showing footings for administration building and workshops



Nos. 1 and 3 circulator blocks under construction

EXCAVATIONS AT TRAWSFYNYDD NUCLEAR POWER STATION SITE

THROUGHOUT the past year steady progress has been made with the construction of the £65m. Trawsfynydd nuclear power station in Merionethshire, North Wales. To date, most of the major excavations and foundation works have been completed, and work is now well advanced on the 93ft. high, 10ft. 6in. thick reinforced concrete biological shield of No. 1 reactor.

Some 200,000 cu. yd. of concrete will be poured during the construction of the station, and while much of it will be employed in the 73ft. internal diameter biological shields, a substantial amount will also be used for the reactor buildings, turbine hall and C.W. system, which are all primarily reinforced concrete structures.

Precast concrete will be employed on a wide scale and of particular interest in this direction will be the use of precast concrete cladding units as panels of up to 30ft. long and 8ft. high, these being finished with local stone.

Major Foundations

With the presence, at a relatively shallow depth (i.e., 25ft.), of a good founding rock, all the major foundations have been taken down to bear directly on it or on mass concrete, thus eliminating any possible complications due to differential movement between such components as the reactors and their associated blowers and boilers. Further excavations which are nearing completion are those for the Goliath crane foundations.

The excavations for the reactor foundations and turbine hall have totalled some 150,000 cu. yd. and have been carried down through glacial moraine containing deep tongues of peat. The underlying rock is an extremely tough and abrasive Cambrian grit, this being a siliceous, medium

grained greywacké, known locally as the Rhinog series. As the natural level of the site varies within a 50ft. range and as the bedrock contours vary appreciably through the site, the excavations have consisted both of removing large volumes of boulder-strewn moraine and peat, together with a considerable volume of hard rock which has required to be blasted before excavation.

A feature of some importance is the exposed nature of the site, which is 600ft. high and is surrounded by hills which form a high-level basin. In an area which is remarkable for its high annual rainfall, special attention has been paid to the provision of pumps to deal with large volumes of grit-laden water at various points round the site.

Reactor Buildings

The excavations for the two reactor foundations and the buildings in which they are housed each measure some 300ft. by 180ft. and the turbine hall excavation is 370ft. long by 220ft. wide, it being carried down below the general level to a depth of 18ft. In order to create a level plane for the buildings, a dome-shaped hillock, which had a maximum height of 20ft., was first removed by two 54RB excavators working as a pair and loading to a fleet of 10 Cummins powered Euclid 15-ton dump trucks. The reactor foundations are taken down 18ft. below this general level, with occasional deeper sumps.

Whilst the general level was excavated in moraine overburden, the excavations for the reactor foundations were taken down in solid rock, except for one part where moraine and peat occurred. The greywacké was drilled horizontally with Consolidated Pneumatic type 59 drills mounted on pusher legs, the maximum hole length being 20ft. and the general run of drill holes being 10ft. The explosive

used was I.C.I. polar ammon gelignite in 1½in. sticks.

During the excavations, each 54RB was attended by a Caterpillar D.9 bulldozer to keep the fall clear and to reduce the amount of gathering needed by each excavator. Particular attention was paid to the maintenance of the hard facing on the bucket teeth and bulldozer blades; due to the abrasive nature of the rock, it was found that the hard facing required to be rebuilt every shift.

The resultant grit-laden water arising from seepages into the excavations whilst earthmoving and rock excavation was in progress, was handled by a number of Sykes "Univac" pumps sited at various points in the excavations. The sizes in use range from 2in. diameter units to 4in. units, these being powered by Lister and Ruston engines. For most of the period, the smaller units were arranged to deliver to a central sump from which the slurry was pumped away by 4in. "Univac" pumps.

Contractors

This 500-MW station is being constructed for the Central Electricity Generating Board by Atomic Power Constructors, Ltd., the constituent members of this consortium being Crompton Parkinson, Ltd., who are responsible for the provision of transformers, switchgear, cables, etc., Fairey Aviation, Ltd., who are supplying and installing the charge machines and control rod mechanisms and are machining and laying the graphite of the reactor cores; International Combustion (Holdings), Ltd., who are providing the boilers, ductwork and biological shield cooling equipment; Richardsons Westgarth and Co., Ltd., who are responsible for the turbo-alternators, condensers and gas circulators and Nuclear Civil Constructors who are carrying out the civil works. The reactor pressure vessels are being fabricated by Babcock and Wilcox as sub-contractors to A.P.C.



General view of turbine house looking north-east

HOUSING PROGRESS IN THE SCOTTISH NEW TOWNS

Development Corporation's Annual Reports

"WITH the better control of building contracts arising from the adoption of the 'Several Works' form of contract and the appointment of a construction progress officer, it has been found possible to keep contractors more closely to their building programmes and to ensure a steady flow of new houses from current contracts," state Glenrothes Development Corporation in their annual report* for the year ended March 31, 1960.

During the course of the year the number of houses completed at Glenrothes was 372, but it became evident to the Corporation that there was considerable resistance to the letting of flats or maisonnettes, and as a consequence an urgent review was made of the future programme from the point of view of the proportion of flats and maisonnettes to houses in general.

Future development in the West Neighbourhood had been proposed on a basis of 20 per cent. flats or maisonnettes while in the existing Auchmuty Precinct the proportion of flats was 29 per cent. with provision for an ultimate figure of 36 per cent.

After careful study the Corporation came to the conclusion that for the time being the proportion of flats and maisonnettes should be reduced to 10 per cent. in the town as a whole, but that reserve sites should be kept throughout the town for a maximum of 16½ per cent. in the long run. The effect of this decision in

*Published in the "Reports of the Cumbernauld, East Kilbride and Glenrothes Development Corporations." H.M.S.O., price 8s.

practice had been to release certain sites originally reserved for flats for general use as housing sites, or for reservation for such appropriate uses as the Corporation may decide. It is evident, however, that there will be no need to build further flats for some considerable time as on the basis of the 10 per cent. figure, a balance of only 272 flats would be required in the whole of the town. It has been decided that approximately 200 of these will eventually be built in the town centre.

The Corporation have taken note of a demand for houses of a better standard desired by various members of the community including staff employed in the new industries. This need is to be met by the construction of detached houses on sites reserved specially because of their amenity value, and further by a development of detached, semi-detached and terraced houses with lock-ups adjoining, to be incorporated in an individual site in South Parks.

East Kilbride

In general, progress has been maintained at the pace already achieved, according to the report of the East Kilbride Development Corporation. The population of the new town is approaching 30,000, and during the year, 1,057 houses were completed, the largest number for any year since the Corporation began operations. However, because of difficulties encountered in planning the layout of Westwood Neighbourhood, some diminution of the rate of output is expected in the immediate future.

Last year's report referred to difficulties in concluding agreements with private developers for the building of houses for

sale at Birniehill first and second developments. These difficulties were overcome during the course of the year and the construction of 21 houses by Geo. Wimpey and Co., Ltd., and 26 houses by Varney (Glasgow), Ltd., has been approved.

The Corporation have also received approval to the construction by them, as an experiment, of 18 houses for sale at Calderwood tenth development. These will be detached houses of five and six apartments in the price range £3,500/£4,000. Calderwood tenth development will include a substantial number of four- and five-apartment semi-detached houses which the Corporation propose to offer for sale at prices in the region of £2,500/£3,000.

Further consideration has been given to the problem of variety in the design of houses in the new town and, with that end in view, the Corporation have approved the construction of 112 flats at The Murray eighth development, comprising features new to the town. The blocks will be of four-storey cross-wall construction with non-structural panel infilling, and the flats will be provided with underfloor electrical heating and fitted with drying cabinets.

Cumbernauld

Cumbernauld Development Corporation report that at March 31, 1960, 401 houses were completed and 539 were under construction. Site servicing commenced for further developments totalling 630 houses and plans were approved for an additional 682 houses, of which 511 are included in the first two housing sites on the south side of the town at Carbrain.

Proceeding is the planning of the post-graduate research project on housing layout and design which is being carried out by Professor Robert Matthew, head of the Department of Architecture of the University of Edinburgh, in collaboration with the Nuffield Trust.

During the year discussions were held on the policy of including high blocks of dwellings which are an essential feature of the overall Cumbernauld plan.

(Concluded from page 1038)

(2) the Windsor Road and Cannon Lane underbridges which carry the motorway over side roads; and (3) the Kimbers Lane footbridge.

As in Buckinghamshire all the road bridges have been designed to carry the Ministry of Transport's standard loading. In addition the underbridges and the Shoppenhangers Road bridge have also been designed to carry the abnormal load of 180 tons. In all cases, except for the Kimbers Lane footbridge it was necessary, due to road alignments, to reduce the structural strength of the bridges as much as possible. No retaining abutments are used, approach or land spans being provided instead.

Movements due to temperature, humidity and creep effects are allowed for by a combination of flexible columns and rubber bearings on the free abutments. The decks are waterproofed with two layers of bituminous sheeting protected by a layer of concrete screed which also acts as a regulating course. The final wearing surface corresponds to that which is used on the adjacent carriageways.

The Windsor Road and Cannon Lane underbridges consist of solid reinforced concrete slabs which, in the case of Cannon Lane, is continuous and in the case of Windsor Road consists of cantilevers with a suspended span. In both cases they are supported on exposed octagonal reinforced concrete columns and buried skeleton abutments which in turn are founded on reinforced concrete strip footings.

The Ascot Road, Shoppenhangers Road and Monkey Island Lane overbridges are of similar design. Basically they consist of precast beams placed side by side supporting an infilling in-situ deck slab which is transversely post-tensioned using Lee-

McCall bars with wedge type anchorages. The precast beams forming the longer spans over the motorway are of post-tensioned construction using the P.S.C. 12/276 "Monowire" system. The shorter land spans are of reinforced concrete construction. The flat soffit effect is achieved by recessing the capping beams on the top of each exposed pier into the deck. As in the case of the underbridges the decks are supported on exposed octagonal reinforced concrete columns.

The Kimbers Lane footbridge is a continuous reinforced concrete construction. Due to the continuity of the ramp and deck construction it is founded on cast in-situ bored piles founded in the chalk below the overlying clay in order to avoid differential settlement of the structure.

The sides of all the bridges in the Berkshire section, except Kimber Lane, will be faced with precast exposed aggregate facing panels, using Mountsorrel granite aggregate. The embankment/cutting slopes under the bridges will be paved with a combination of exposed flint aggregate and Stoneycombe limestone exposed aggregate facing panels.

Railway Bridge

Construction work in Berkshire was actually begun in 1939, but was stopped during the following year, and all the structures which were commenced at that time are now being completed to designs prepared by the county council. One of these is a bridge of three spans over the Western Region railway line.

The side spans of this bridge are 36ft. 9in. and the centre span is 73ft. 10in., measured on the skew. These spans are carried on fixed bearings at each abutment and on one deflection and one combined expansion and deflection joint at the trestles. The structure consists of six

longitudinal plate girders carrying transverse rolled steel joists, which in turn carry a 9in. reinforced concrete deck. All steelwork had been erected prior to the war.

It was found necessary to redesign the original deck and to strengthen the transverse beams to suit modern loading conditions. The transverse beams were strengthened by welding plates to the top and bottom flanges. Main girders were found not to need alteration. Owing to the omission of footpaths and cycle tracks the overall width of the bridge has been reduced and the outer beams on each side are to be removed on completion of the new deck.

To provide the necessary headroom of 16ft. for future electrification the bridge had first to be raised 16in. This was done in June, 1959, early one Sunday morning without line occupation. Hydraulic jacks were provided at all girder bearings and the whole structure was raised in stages of approximately 2in. Temporary packings were provided at all stages to guard against failure on any one jack. The actual operation of lifting and insertion of new stools took about five hours.

Other works in the Berkshire section include a reinforced concrete two-hinged portal subway for pedestrians to replace Cox Green Road which is severed by the by-pass, and modifications to flood culverts which were constructed before the war. At Monkey Island Lane two culverts replace two smaller culverts constructed prewar. Reconstruction was necessary because of increased waterway requirements and also because of the provision of approach embankments to Monkey Lane Bridge, previously no bridge was envisaged at this point.

The estimated cost of the Berkshire section of the by-pass is £1¼m.

COVENTRY CIVIC AERODROME DEVELOPMENT

Construction of Soil-Cement Runway

THE first phase of a comprehensive development scheme, comprising the construction of a 5,300ft. long paved runway, is about to be completed at Coventry Civic Aerodrome, Baginton. The development scheme is to be undertaken in four stages and will provide the city with a modern airport capable of attracting and servicing a high intensity of passenger and freight air traffic.

The construction of the aerodrome at Baginton was begun in 1935 by Coventry Corporation, when land previously occupied by an obsolete sewage farm was levelled and graded, and an all grass landing field was laid down over an area of some 387 acres.

During the war years the aerodrome was used for military purposes and, since 1946, has been licensed for civil flying. Although during this period the excellent quality of the turf has sustained a large volume of air traffic, the riding characteristics of the grass landing strips have been found to be growing less suitable for modern aircraft on scheduled services.

Phases of Development

The primary need in the first stage of development is therefore the provision of paved runways. Since meteorological records indicated that 98 per cent. usage is possible in the main landing direction, a single main runway is being constructed at present in this direction. The secondary landing directions will be maintained on grass until a paved secondary runway is built in the next stage of development.

This first phase consists essentially of the construction of a paved runway 5,300ft. long and 150ft. wide, linked with the present Terminal Area by means of a paved taxiway 400ft. long and 60ft. wide. It also includes the provision of runway, taxiway and approach lighting.

Successive phases of development envisage: (stage 2) construction of a secondary runway, 4,300ft. long and 150ft. wide, and a full perimeter track 60ft. wide; (stage 3) construction of a new terminal building, additional hangars and extensive aprons, and a new approach road and car parking facilities; and (stage 4) the ultimate extension of the main runway to a length of 9,000ft.

Runway Design and Construction

A soil-cement runway was considered to be a suitable form of construction on this stable and easily drained sandy gravel subsoil. An extensive site investigation was made over the whole area, followed by soil-cement laboratory tests. Maximum

dry densities of between 124-134lb./cu. ft. with optimum moisture contents of 7 per cent.-10 per cent. were established and soil-cement cylinders made with varying percentages of Portland and extra rapid hardening cement (ordinary Portland cement with 2 per cent. calcium chloride). Cylinders made with ordinary Portland cement gave lower strengths than had been anticipated; but strengths of up to 600lb./sq. in. at seven days were achieved using 8 per cent. cement by weight of extra rapid hardening cement. This was due to organic contamination by previous use of

the laying of a third 6in. processed layer. It has also been found necessary to open a small borrow pit to provide additional premix material for this area and for a "fill" area. The final designed runway profile has a single end to end gradient of 1:3,167, which is of course, excellent for landing and taking off. The crossfall of the runway is 1:80 graded from one edge to within 16ft. of the other edge.

The channel running down one edge of the runway is 16ft. wide and will contain gulleys spaced at 100ft. intervals. In view of the high cost of carrying the run-off to



Blaw Knox PF90 finisher laying premix soil-cement

the site over a long period for irrigation of sewage.

Laboratory C.B.R. tests gave values of between 16 per cent. and 60 per cent. over the greater part of the runway area, these values being slightly lower for the soaked condition. The minimum design loading for the runway was fixed at L.C.N. 45 for the air traffic that is expected to use the aerodrome. Allowing for a minimum C.B.R. value of 13 per cent. in the sub-base, the flexible paving thickness for this L.C.N. is 15in. and this is made up as follows: 1in. wearing course of hot-rolled asphalt; 2in. base course of hot-rolled asphalt; 6in. top layer of soil-cement (plant mixed, spread and compacted); and 6in. bottom layer soil-cement (processed in situ and compacted by mix-in-place single pass train).

The longitudinal levels of the paved runway were fixed with an aim to balance excavation and fill. However, during the subsequent excavation work an area of unstable formation was found, necessitating

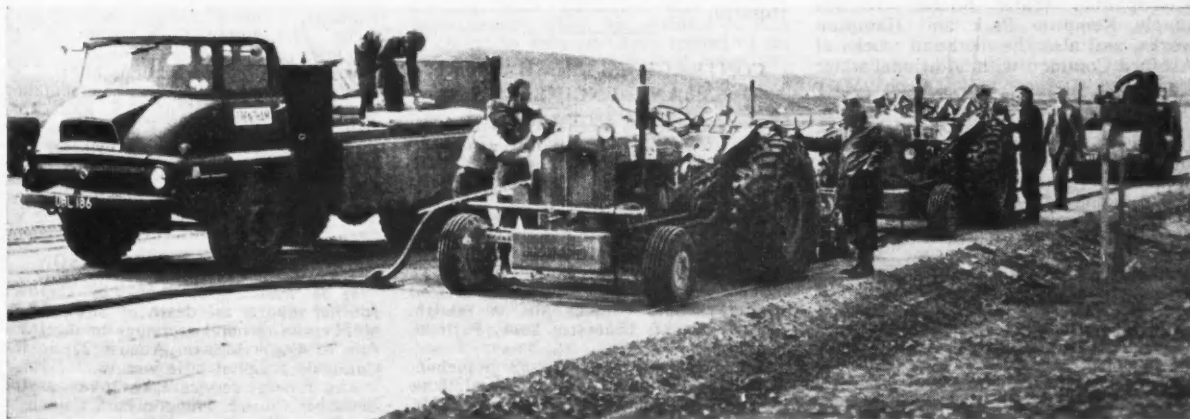
an outfall and of the high permeability of the subsoil, it was decided to dispose of the run-off by soakage. Soakaway shafts 3ft. in diameter and 11ft. deep have therefore been sunk 80ft. away from the runway edge at each gully position.

The completed runway will have full daylight surface markings, high and low intensity edge lighting, and threshold lighting. The approach lighting will consist of extended centre-line high and low intensity lighting with cross bars. The electrical installations will be carried out by the City Engineer's department.

The whole of the work has been designed in the office of the City Engineer and Surveyor, Mr. Granville Berry, M.I.C.E., M.I.Mun.E.

Control Tests

Control tests are carried out both by the site laboratory and by the City Analyst to the following specification: (a) in-situ C.B.R. tests on sub-grade—minimum of (Concluded on page 1052)



Howard train processing bottom layer of soil-cement base

FINDING MORE LAND FOR DEVELOPMENT

Minister's Advice to Planning Authorities

IN a circular to local planning authorities, Mr. Henry Brooke, Minister of Housing and Local Government, has stressed the importance of securing the more intensive use of urban land, and has asked those planning authorities which have not already done so to consider now whether they need to allocate more land for housing and other development. He says that his Department would welcome discussions with officers of planning authorities in whose areas land for development is becoming a problem.

The Minister asks planning authorities for the towns to encourage conversion of suitable property into flats, and, where appropriate, the redevelopment at high densities of older residential areas of low density. In reviewing their development plan they should review their general standards of density, and in dealing with applications for planning permission, they should ensure that proposed development makes adequate use of the land, "bearing in mind the demand for more and more houses and flats and the great change in social customs which no longer favour big houses and gardens."

Land within Green Belt

Where a green belt has been established or proposed, "it must be matched by adequate provision for balanced and compact development elsewhere." This means using land within the green belt to its full capacity and selecting adequate land for development beyond it—avoiding wherever possible good agricultural land.

It is important, the circular goes on, when selecting land beyond the green belt for development, for planning authorities concerned to keep in close touch with the authorities of the crowded areas from which the demand is likely to arise. The Department has already arranged a number of conferences, on a regional basis, for areas where these problems arise; it proposes to arrange further similar conferences in the near future and will help in any other way it can to promote co-ordination between planning authorities. "The aim," says the circular, "should be to encourage employment as well as

people to move out from the large cities to places beyond the green belt. Planning authorities should therefore ensure that sufficient land is reserved for future factory and office building, even if there is little demand for land for these purposes at present."

Planning authorities are asked to prevent waste of land, and to ask owners of land which for no apparent reason is unused whether it is still needed by them for the use assigned to it by the development plan and if not whether it can be made available for development. It is pointed out that there are opportunities also in some parts of the country for restoring derelict land.

In another section of the circular the Minister draws attention to the review of development plans, which were prepared to cover a period of about 20 years (as originally recommended). He thinks it desirable that the plans should continue to cover a period of 20 years and that accordingly in the process of review they should be extended to cover land allocations up to 1981. Unless this is done the plans would have little value as a guide for future development, and the Minister suggests to planning authorities how and at what stages the plans should be so extended.

N.F.B.T.E. Urges Action

Prompt action by planning authorities on the Minister's circular is urged by the National Federation of Building Trades Employers.

The Federation hope that planning authorities will lose no time in deciding whether more land in their respective areas can be allocated to housing purposes. They believe that it will be too late if this is left until development plans are reviewed and approved in the ordinary way.

The Federation stress the importance, in relation to the size of the future housing programme, of that part of the Minister's circular which recognises that where green belts restrict development planning, authorities must make constructive proposals to provide developers with alternative areas where they may build.

M.W.B. AWARD CONTRACT FOR 4½-MILE TUNNEL

A TUNNEL of over 8ft. diameter, 4½ miles long, is to be driven 150ft. below ground between Staines and Hanworth, Middlesex, for the Metropolitan Water Board. It will supply Kempton Park and Hampton works, and also the filtration works at Ashford Common with additional water from the Staines and Queen Mary reservoirs.

Edmund Nuttall, Sons and Co. (London), Ltd., who have been awarded the contract for this work, expect to complete over 300ft. of finished tunnel per week so that the tunnel should be ready for use by the end of 1962. A mechanical digger shield of the latest drum type will be used to drive the tunnel.

Mr. W. M. Lloyd Roberts, M.I.C.E., chief engineer of the Metropolitan Water Board, who is responsible for the design and supervision of the work, has selected the use of wedge block pre-cast segments for the lining of the tunnel. Twelve concrete segments, including the wedge block which is driven in longitudinally at the crown of the tunnel, form a complete ring. These segments weigh less than 3cwt. each and

can be rapidly assembled by hand. The contractors are erecting a special factory at the site equipped with the necessary heating arrangements for rapid curing to manufacture the 150,000 segments that will be required.

CONTRACTORS MECHANICAL PLANT ENGINEERS

The Contractors Mechanical Plant Engineers are planning to form two new branches, one covering the Manchester area and one covering Hampshire and Sussex.

An informal meeting is to be held on September 13 at 7.30 p.m. at the Nags Head Hotel, Jackson Row, Deansgate, Manchester, 2, to consider starting a branch in Manchester and interested persons should contact Mr. W. Haigh, Lindley Mount, Lancaster Lane, Parbold, Lancs.

The Hampshire and Sussex branch is in the process of being formed and those interested should communicate with Mr. H. Warren, Conigar, Beacon Square, Emsworth, Hants.

Late Construction News

BIG DIRECT LABOUR AWARD.—Glasgow Housing Committee have accepted the £543,995 tender of their direct labour department for the erection of 308 dwelling in four multi-storey blocks in the Hutchesontown-Gorbals area. Six selected contractors also tendered for the work. The committee are also to negotiate with George Wimpey and Co., Ltd., for the erection of multi-storey flats on an 18.5-acre site adjoining Knightswood Golf Course.

ANIMAL FEED MILL.—Taylor Woodrow Construction, Ltd., are to instal mechanical equipment worth about £1m. in the new compound mill for the British Extracting Co., Ltd., of Bromborough Port, New Ferry, Birkenhead. The contract for installation is worth £180,000 and the work will be completed by early 1962. J. D. Wilson and Partners, Bristol, are the consulting engineers.

CONTRACT FOR HUMUS TANKS.—The Birmingham, Tame and Rea District Drainage Board have accepted the tender of C. Bryant and Son, Ltd., Birmingham, 10, at £149,034, for the construction of four 80ft. diameter humus tanks at Minworth New Works. The work involves about 28,600 cu. yd. of excavation and 4,500 cu. yd. of reinforced concrete. M. R. Vincent Davis, is the engineer to the Board.

PRESTON URANIUM PLANT.—Work will begin in October on the erection of a highly enriched uranium recovery plant at Salwick, Preston, for the United Kingdom Atomic Energy Authority. The contract, valued at £475,386, has been placed with William Townson and Sons, Ltd., Bolton. The scheme has been designed by the chief architect's department, U.K.A.R.A., Risley.

BANKSIDE POWER STATION.—Selected contractors are now being invited to tender for the erection of the superstructure of extensions to the Bankside Power Station, London, S.E.1. The consulting engineers to the Central Electricity Generating Board are Mott, Hay and Anderson, 9 Idlesleigh House, London, S.W.1.

MANCHESTER DIRECT WORKS DIRECTOR

Manchester Direct Works Committee announced this week that, subject to the approval of the City Council, they have appointed Mr. W. K. Wilson, aged 49, city building surveyor in Nairobi, as director of the council's new direct works department.

He was chosen from a short list including: T. Caulfield, building manager, St. Helens Corporation; J. Dudson, building works manager, Willesden Corporation; F. Higginbottom, chief engineer, Nigerian Ports Authority, Lagos; S. W. Johnson, general manager, Salford Corporation direct works department; H. Jones, works manager, housing direct works department, Manchester Corporation; R. H. Macintosh, construction manager, Scottish Special Housing Association, Ltd.; G. C. Osborne, projects engineer, Cementation Company, Ltd., London; J. S. Raitt, construction manager, East Kilbride Development Corporation; J. W. Struthers, construction supervisor, Leyland Construction Company, Lancashire.

MR. JOHN A. McPHERSON

It is with regret that *The Contract Journal* reports the death of Mr. John A. McPherson, general secretary of the Institute of Quarrying, on August 27, in the Colindale Hospital. He was 46.

The funeral service takes place at the Cemetery Church, Hendon Park Cemetery, Holders Hill Road, Hendon, London, N.W.7, today, Thursday, at 2.30 p.m.

R.I.C.S. DEVOTE ANNUAL CONFERENCE TO EDUCATION

THE 1960 annual conference of the Royal Institution of Chartered Surveyors being held this week at Bangor is devoted to education, the theme of the conference being "Education for the Surveyor's Profession."

At the opening session yesterday, Wednesday, the principal addresses were given by Sir John Wolfenden, C.B.E., vice-chancellor of the University of Reading, and Mr. A. A. Part, C.B., M.B.E., a deputy secretary in the Ministry of Education. Today, Mr. Henry W. Wells, C.B.E., F.R.I.C.S., will introduce the report of the Special (Review of Educational Policy) Committee of the Institution. This report, together with the principal address, will form the subject-matter for discussion at the conference.

Professions Endangered

"As education, in the full-time sense, is more widely spread, so inevitably there will be fewer and fewer people available to do the unexciting and distasteful jobs," Sir John Wolfenden told the Conference. He was speaking on "Educating the Future Citizen."

"I see a danger that a new sort of snobbery may begin to show itself," he went on. "I suspect that the objective nowadays is not so much a white-collar job in an office as a white-coat job in a laboratory." The greater the appeal of the technologist's laboratory the less would be the appeal of the professions.

The young at present were enjoying all the advantages of a seller's market. This could well be a contributing factor to all the restlessness, the arrogance and even the lawlessness of the rising generation.

It was a commonplace that after any major war there was a sharp rise in the birth-rate; and this phenomenon was present today, under its nickname of "The Bulge." Not only did "The Bulge" provide more children, but "The Trend" now made a higher proportion than ever before stay at school to qualify for sixth-form studies and, ultimately, for places in universities.

In recent years, it was likely that a considerable potential contribution to the educated population of the country had been lost by reason of a drift away from the schools at 15 or 16 by boys and girls who could have benefited from longer schooling. If this was so, it was encouraging that "The Trend" was keeping many more of them at school for longer.

Sir John thought that the consequences of Bulge and Trend for the professions were not easy to foretell. He had read the Report of the Special (Review of Educational Policy) Committee of The Royal Institution of Chartered Surveyors with the greatest interest and admiration. It was a remarkably thorough, careful and comprehensive document. On the technical aspects of it he had no right to an opinion, but on some of its more general aspects he thought that there might be an honest and legitimate difference of opinion.

He agreed with the Report's view that the standard of entrants to the profession should be progressively raised, but he was not certain how this could best be done. "I know that in your profession you want young men coming forward who are both culturally and vocationally of the highest possible educational standard. Of course you do. So does everybody else," he said.

The accepted view was that the University population was to be doubled within the next 10 years, that Colleges of Advanced Technology were to be increased in quantity and quality, and that teachers' training colleges—with a three-year instead of a two-year course—were to be multiplied manifold. "I wonder, sometimes, if there

really can be all that many more who will qualify for higher education, however active Bulge and Trend may be going to be," said Sir John.

He was sure that there was a case for optimism in certain professions. There would undoubtedly be more and more boys and girls in the future who would reach the proper standard of qualification for those callings which demanded both a reasonable scholastic standard and a reasonable standard of practical ability. The Royal Institution of Chartered Surveyors should make sure that, in the competition that there would inevitably be for these young men and women, they got their fair share.

"G.C.E. Dangerous Master"

To assess what was a "reasonable scholastic standard" required a great deal of serious thought, said Sir John. The G.C.E. examination was as good a yardstick as any other, but he suggested that though the G.C.E. was a splendid servant it could be a dangerous master. Each profession should deliberately decide what the G.C.E. should be required to demonstrate or to guarantee about each prospective entrant to that particular profession.

The danger was that one set of requirements, appropriate enough to, say, University admission, might be taken over by a profession for which University requirements were irrelevant. The R.I.C.S. should decide what it wanted of a surveyor, without bothering what others might think appropriate for a University student or a lawyer or an accountant. One of the major problems was how far these requirements should be of a vocational kind and how far they ought to guarantee some sort of general education.

"Professions Servants of Public"

"The professions are a great force in modern society," said Mr. A. A. Part in his address entitled "Education for the Professions." "Because this is so, they have a duty to explain their activities to the public. This is necessary not just as an aid to recruitment or to the financial prosperity of a profession, but as a safeguard of democracy. For, if democracy is to be respected, the professions must think of themselves as the servants of the public and not their masters."

Earlier in his address, Mr. Part said that a professional man must be concerned with work that had a substantial intellectual content if he was to be distinguished from the technician or the craftsman. Mastery of concepts and principles was at least as important as knowledge of detail.

Professions vied with each other in improving their education and training arrangements. This was splendid so long as standards were genuinely related to the work of the profession, and were not raised simply for the sake of competitive prestige.

The need to master principles reflected the need for both a good general education and an ever stronger academic element in professional education. It was for each profession to decide what it considered to be a good general education. In doing so they would do well to bear in mind, as The Royal Institution of Chartered Surveyors had done, the strong trend towards staying longer at school.

Between 1951 and 1958 the passes in most subjects at G.C.E. Advanced Level had increased by anything from 50 per cent. to 100 per cent., and between 1958 and the middle 1960's the numbers in the sixth forms in England and Wales were expected to double.

Mr. Part did not think that any pro-

fession should be content for much longer with recruiting the bulk of its intake from boys whose general education had not gone beyond G.C.E. Ordinary Level. "But whatever plans are made to take advantage of the rapidly growing number of sixth-formers and university graduates, it is important not to close the door to students who have left school earlier," he said. "Many of them acquire a fresh educational impetus under the stimulus of their jobs."

It was sometimes said that correspondence courses and evening courses were a good test of character, and that the number of students who failed was a measure of success in maintaining standards. "I suggest that there are ways of testing character and maintaining professional standards that do not involve such a massive waste of human effort and educational expenditure," he said. "Is it not more profitable to take greater care over initial selection and to place the emphasis on helping students to succeed rather than threatening them with the consequences of failure?"

Abolishing Correspondence Courses

The increasing complexity of technical knowledge had led to a growing appreciation that more time was needed for academic study if a candidate for professional status was to do more than cram himself with a lot of knowledge. He expressed the hope that The Royal Institution of Chartered Surveyors would soon move towards a situation where correspondence courses for those aiming at professional status could be abolished.

Mr. Part thought that sandwich courses might well suit surveying. These had become increasingly popular—in 1956 there were only 1,400 sandwich course students in England and Wales, but the total had now risen to over 9,000.

A project which had occupied much of the time of the Ministry of Education during the last two or three years was the London County Council's proposal to establish a College of Architecture and Advanced Building Technologies as part of a major re-organisation of the Polytechnic, Regent Street. This would run full-time or sandwich courses in surveying, architecture, building, building engineering services, civil engineering, and town planning. Most of these would be at Diploma in Technology (i.e., honours degree) level, and it was planned that the college would also develop post-graduate and research work. "Thus, for the first time in this country, all the partners in building will be brought together during their education," said Mr. Part.

He had much to say in praise of the Report of the Special (Review of Educational Policy) Committee of The Royal Institution of Chartered Surveyors. In particular he welcomed the interesting suggestion that the admission to the Institution of a candidate should be conditional upon the employer giving an undertaking that the candidate would receive adequate practical experience as part of his training. He also agreed that it was desirable that more senior members of the profession should help with the teaching of surveying in colleges.

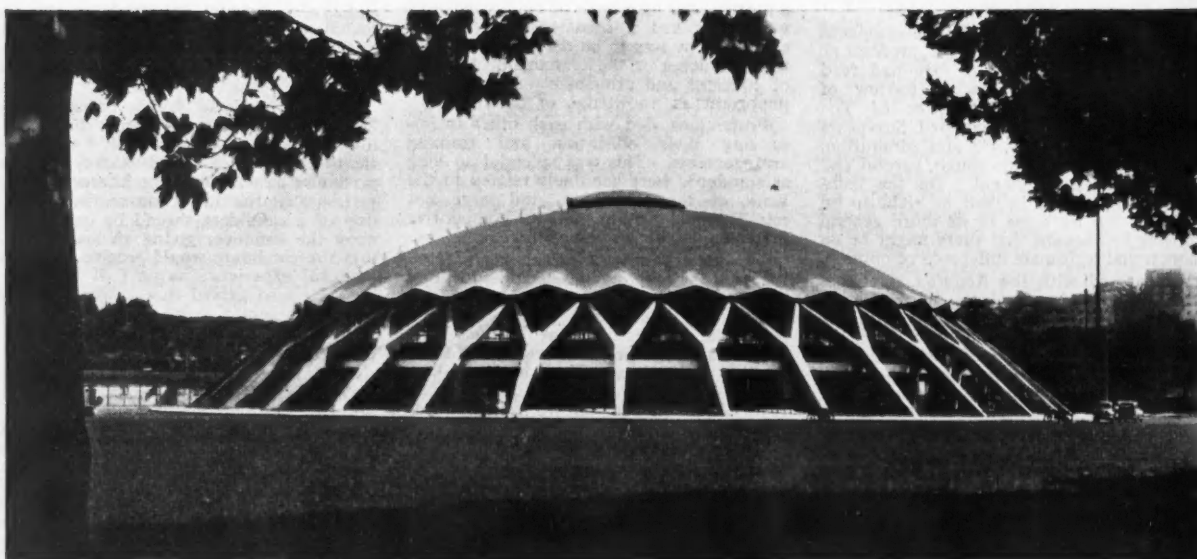
Turning to the relations between technical colleges and professional institutions, Mr. Part said that teachers preferred to be allowed to do their own job in their own way, and the best of them did their best work when there was no external control over the syllabus. "That is one reason," he said, "why the universities so greatly prize their academic freedom and why, at the other end of the scale, the infants' schools are in many ways the most successful part of our educational system."



Flaminio Stadium grandstand with its cantilevered canopy



Approach to the Palazzo dello Sport

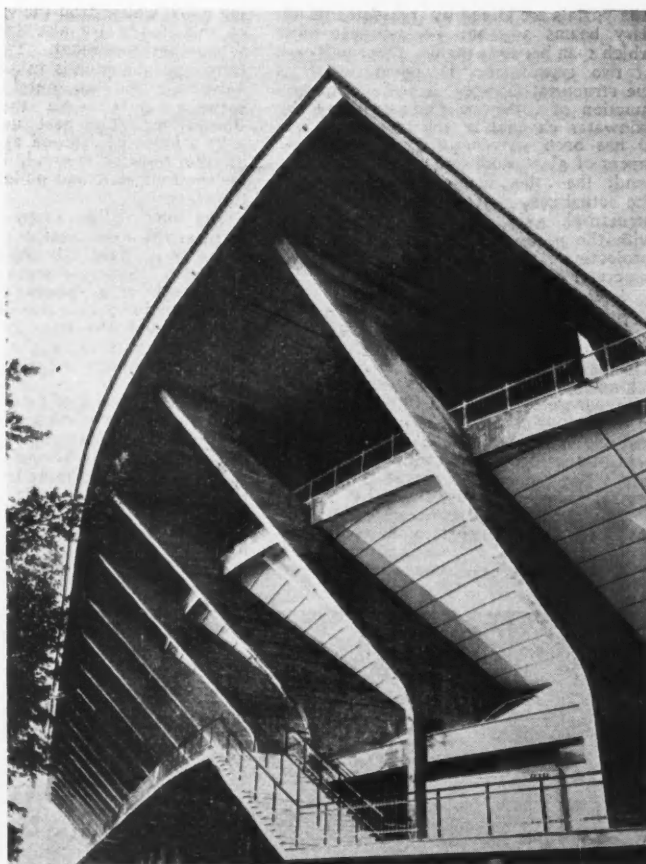


The Palazzetto dello Sport

International Construction

OLYMPICS GIVE ROME THREE NEW BUILDINGS

Unusual Features in Nervi-Designed Structures



Rear view of the Flaminio Stadium grandstand

DESIGNED by Professor Pier Luigi Nervi for the 1960 Olympic Games, three reinforced concrete structures of exceptional architectural merit have been added to the aesthetic wealth of Rome.

The three buildings are the Flaminio Stadium, the Palazzo dello Sport, and the Palazzetto dello Sport. All are built of reinforced concrete and incorporate many

interesting design and engineering features.

Standing on the site of the old Nazionale Stadium at the via Tiziano, the Flaminio Stadium accommodates 50,000 people, comprising 30,000 standing and 20,000 seated, half the number being under cover. These numbers have been achieved despite a condition of the tender specification that the new stadium should not occupy a greater overall area than the old structure.

The stadium is entirely constructed of reinforced concrete, as is the canopy which shelters one of its long sides. The stands are formed with main supports of two-hinged portals with extended cantilevers upwards to the rear; they are constructed on 33ft.-long Franki piles with diameters of 21in. and 13½in., capable of carrying respectively 90 and 55 tons. Surrounding the stadium below the portals are four gymnasiums and a swimming pool, each with its own entrance, changing rooms with baths, toilets and cloakrooms, and its own central heating equipment, as well as offices, first-aid rooms, public cloakrooms, stores and press rooms.

The four gymnasiums are designed respectively for gymnastics (115ft. long and divisible into two), fencing, heavy athletics, weight-lifting and boxing; these last are from 46ft. to 52ft. long. The swimming pool itself is 82ft. long by 33ft. wide—sufficient for practice lengths for Olympics, though without the width for actual events. A spectators' gallery runs along one side of the pool.

Cantilevered Gallery

An unusual feature in the planning of the stadium is the external access gallery cantilevered from the rear portal columns, which surrounds the entire perimeter, on a lower level round the ends to give access to the standing places, and higher along the sides, leading to the seats. Staircases of bent planes of concrete lead from one level to the other and down to the ground; in addition broad staircases 17ft. 6in. wide lead directly to the entrances of the various sections of the stadium, all of which have their own bars, cloakrooms and toilets.

Ninety-two main portals supporting the stands are spaced approximately 19ft. apart. In order to make the maximum use of the under-seat space, they all have an identical span between columns, the variation in height of the stands coming from the extended cantilevers of the upper arm.



Interior view of the Palazzetto dello Sport

The portals are joined by transverse secondary beams and the precast seat units which span between them. These units are of two types: one, U-shaped, which is the structural member, has the secondary function of collecting rainwater, and the rainwater channel in the interior of the U has been waterproofed with alternate layers of glass wool and cold asphalt and sand; the other, carried upon it, forms the actual seat and foot rest. The lower, structural, units were made monolithic with the portals and with each other by projecting reinforcement and in-situ concrete.

Canopy Design

Another interesting feature is the simple canopy which shelters the covered seats. This is a double cantilever poised on a raking support formed of a steel tube filled with concrete. From this the front half of the canopy cantilevers 47ft. 9in. forward and the rear 40ft. 6in. backwards to be held at the top of the cantilevered portal arm. The forward thrust of the raking central support is restrained by a slim horizontal reinforced concrete tie linking the head of the support to the top of the portal arm.

The canopy was constructed in two

ing units, which form the visible underside of the stands are also left without any subsequent treatment. They are cast in ferro-cemento moulds to a smooth regular finish and the horizontal grooved joints between units make the soffit's only decoration. The seat units themselves have a finish of exposed aggregate applied by the transfer method, bush-hammered for the foot rests and polished smooth for the seats.

The soffit of the canopy is similarly left as from the forms, smooth in the precast front units, lightly board-marked in the back slab. Staircase walls are faced with thin panels of bush-hammered travertine, and travertine panels also face the external walls around the base of the building.

Internal finishes in the various rooms below the stands are plaster, paint and tiling.

The entire work of demolishing the old stadium and completing the new took 18 months—from June, 1957, to December, 1958. It was complicated by the fact that the games area had to be left in use during the entire period and the approach roads had also to be free for public access. A central mixing plant was therefore set up for the in-situ concrete just outside the southern end of the stadium and the con-

each level. To reduce the total height, the arena is below ground, with the top of the lowest bank of seats at ground level. The main official entrances are to the second bank of seats, reached by monumental external staircases. The topmost bank of seats is designed as a balcony; its top floor cantilevers outwards, roofing the main gallery, and itself forming the upper gallery. The curved underside is constructed of precast reverse-box-shaped ferro-cemento units, the ribs of which give a lotus-like pattern to the gallery ceiling.

Dome Interior

Structurally, the interior of the dome is similar to that of the first exhibition hall in Turin—rows of precast V-shaped ferro-cemento units placed side by side to form corrugations varying in depth from 1ft. at the crown to 4ft. at the edge, with in-situ reinforced concrete ribs in the ridges and valleys. Units are pierced to provide light, ventilation and sound absorption; lighting placed in the valleys reflects off the white acoustic lining of the units and gives a diffused light throughout the hall. Precast concrete slabs span between the tops of the V-units, made homogeneous with them by the in-situ concrete at the ridges. The whole external surface of the dome will finally be covered with aluminium.

The thrust of the dome is taken by fan-shaped buttresses, three corrugations converging to form each "fan," which springs from the topmost gallery. Restraint comes from the inner column supports to the uptilted gallery roof. An expansion joint between the precast dome units and the in-situ fan members provides for thermal movement in the dome. From the "fans" the load is taken down to the foundations on columns splayed at a slightly narrower angle. Between the first and second galleries these columns have a twisted section, with a reverse taper on opposite sides.

Delicate peripheral columns surrounding the upper gallery were precast to their shape in one piece, in ferro-cemento forms, as were all the seats.

The whole construction, including the foundations, was completed in 13 months; the dome itself being built in 2½ months. Nervi and Bartoli were in this case contractors solely for the structure, the total cost of which amounted to approximately £350,000.

Palazzetto dello Sport

As the name implies, the Palazzetto dello Sport is the smaller of the two sport palaces, and is situated not far from the Flaminio Stadium. The design is essentially that of a "big top" in concrete, held by concrete guy ropes.

Owing its general design to Annibale Vitellozzi, and its reinforced concrete design to Pier Luigi Nervi, the Palazzetto was planned for the display of all sports which take place under cover. For boxing and wrestling matches it will hold 5,000 spectators, and 4,000 for other sports.

Accommodation provided includes bars, cloakrooms, lavatories and first-aid posts for the public, four groups of changing rooms, administrative offices and a press room. There is also a caretaker's flat, two storerooms and a transformer room, and in the semi-basement are the heating, cooling and air-conditioning plants.

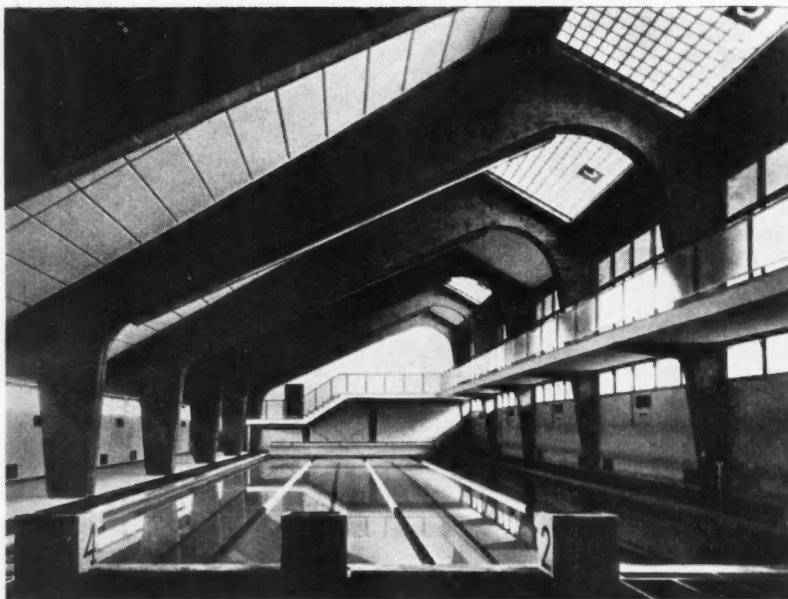
The 51,500 sq. ft. area of the building is covered with a 200ft. diameter dome carried on 36 supports, each a low raking Y, continuing the line of the roof; a second vertical leg, tapering down from the fork of the Y, makes these in-situ concrete units self-supporting.

Circular Foundation Beam

A circular prestressed concrete foundation beam 8ft. wide and 267ft. in diameter finally restrains the thrust of the dome through the supports.

Besides transmitting to the foundations the load from the dome and its self-weight, the supports are designed to resist horizontal forces due to wind pressure.

The foundation beam is prestressed on



The swimming pool under the stands at Flaminio Stadium

sections: the rear portion consists of reinforced concrete beams carrying a soffit slab, both cast in situ; the front portion is formed of a series of V-section units flattened to the tip and precast in ferro-cemento, light thin-section reinforced concrete formed of layers of wire mesh injected and coated with cement and mortar. Their weight is further reduced by a series of round glazed apertures in each side of the V, which have the additional function of lighting the seats below, during after-dark events, by fluorescent tubes in the base of the V.

A radio and television box is provided at the centre of the covered side above the central official seats. It is a light glass-walled metal structure carried at the front on raking supports coinciding with those of the canopy and at the back by the main portals.

The finish of the whole structure depended largely upon the fine quality of the natural concrete. The main portals, left everywhere visible, were cast against timber formwork made up of narrow carefully prepared boards, and they were left as they came from the forms, except for a very light sand-blasting, sufficient to remove any small superficial defects while leaving the board marks clearly visible.

Soffits of the U-shaped structural seat-

crete was pumped to near the point of placing, through pipes placed along the base of the stands and growing progressively longer up to a maximum of approximately 650ft. These pipes discharged into the skips of two travelling cranes which placed the concrete in the forms.

A casting yard for the precast elements was similarly set up at the southern end of the stadium and casting of the precast units proceeded while the portals and other in-situ work were being constructed, so that no time was lost.

Professor Nervi's architect son Antonio Nervi collaborated in the design of this structure. The Impresa Ingg. Nervi and Bartoli were contractors for the whole scheme.

Palazzo dello Sport

Numbered among the finest of Nervi's buildings, the Palazzo dello Sport, with its 330ft. diameter flattened dome, is situated at the crest of a slight hill at the centre of the E.U.R. exhibition ground outside Rome.

The building, which is designed for tennis, basketball and boxing events, has accommodation for 14,000 spectators in three banks of seats, with another 2,000 at the ringside during boxing events. Gallery foyers surround the building on

the Freyssinet system with two layers of seven cables, overlapping and anchored at the foot of each support. It is constructed on a 4in. thick bed of lean concrete covered with 2in. of sand and a layer of bituminised paper. This beam reduces the load on the ground to 0.365 tons per sq. ft. The elastic deformation due to loss of prestress caused by the pressure of the dome amounts to an increase of approximately 4in.

The supports were cast against carefully designed timber formwork and then left as they came from the forms; the combination of good concrete with the strong timber markings gives them a look of fine, taut strength.

A total of 1,620 precast concrete units make up the dome.

The division of the roof into precast elements is a function of its structure—a structure both simple, practical, and of proved economy—but the actual shape of the units may be, and was, designed to suit purely aesthetic requirements: it is the interplay of the diamond-shaped sections of this roof, narrowing to the apex and broadening to the base, to end as triangles tapering to meet the converging supports, that gives this dome its grace.

Ferro-cemento Units

The units were precast on the site, on forms which were in their turn made on a template which reproduced exactly a section of the dome—in this case the section contained between two supports, or 1/36 of the whole. The forms were concrete-made with a regular smooth surface which gave a perfect finish to the soffit of the box-shaped units, which are 1in. thick and made of ferro-cemento. The ferro-cemento in this case was produced with 0.2in. wire arranged in both directions for reinforcement, with a double layer of mesh weighing just over 1lb. per sq. yd. The topmost rings of units have additional reinforcement in the form of 0.6in. and 0.9in. bars. Projection of the reinforcing wires from the sides of the units assists in uniting them structurally with the in-situ concrete placed in the channels between them, and as a screed over the top, this in-situ screed being further reinforced with 0.3in. steel, placed concentrically and radially. The total thickness of the completed roof, including units and screed, is 4½in.

Construction of the building began in July, 1956, and was completed in September of the next year. Construction of the actual dome took 40 days, several of which were lost through bad weather.

The units were being cast while the foundations and the supports were being constructed, and work was progressive throughout: the screed reinforcement and the surface screed itself were placed as soon as a section of dome units was in position and while placing of the remainder of the units was still in progress.

Erection of Units

Erected by means of two cranes, one at the centre and one working round the periphery, the units were placed on a series of concentric rails fixed directly to the tubular steel scaffolding, and so arranged that a unit rested on two rails, top and bottom.

The dome was calculated as a membrane; on its completion and the removal of the formwork and temporary supports the static behaviour of the structure was checked by means of strain gauges placed in the fork of the Y-supports. These readings showed the perfect "centring" of the loads and, incidentally, confirmed the accuracy of the preliminary calculations. Similarly, the loss of prestress in the foundation beam, when checked on the

removal of the formwork, agreed exactly with theoretical assumptions.

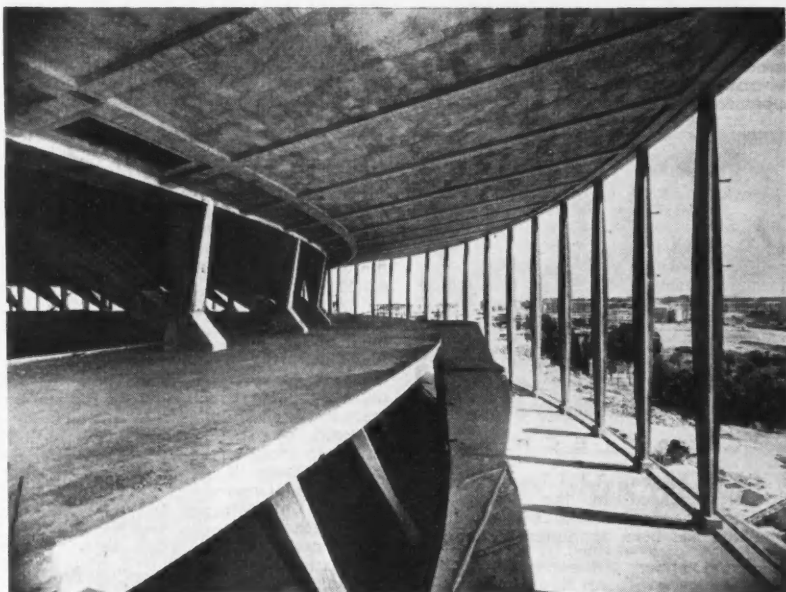
Inside the building, the tiers of seats are of in-situ concrete. The designers had wished to precast them and they do, in fact, lack the fine detailing they might otherwise have had. Together they form on plan two crescents, giving the arena its oval shape. The arena floor itself is 3ft. 3in. below ground level; from arena to roof apex is a height of 69ft.

The arena is lit by a double ring of projectors at the centre of the dome. General lighting is indirect, from 18 metal bowls suspended from the roof by almost invisible steel wires.

Outside the building, the space between the supports is laid out with lawns and flower borders; a concrete road encircles it, and leads by two approaches to the via Tiziano, to ensure easy access.

The total cost of the completed building, including all equipment, amounted to less than £155,000.

The work of construction was carried out under the auspices of C.O.N.I. (the Italian Olympic Games Committee); the contractors were Nervi and Bartoli.



The Palazzo dello Sport

COMPRESSED AIR SOLVES TRADE WASTE PROBLEM IN ATHENS

THE recent growth of Athens brought the tanneries of Cavada Brothers, Ltd., within an inhabited area, and the firm was requested by the city hygiene department to purify the effluents from the factory before they were discharged into the municipal sewage system.

At first, the company tried to filter their trade wastes, but without success. Next, chemical purification assisted by mechanical agitation was attempted, but was abandoned because oxidation was not complete, corrosion resulted in heavy maintenance costs, and enormous power was needed to drive the agitation machinery.

Atlas Copco Greece, Ltd., suggested the use of compressed air as a purifying medium, and with the agreement of the chief chemical engineer of the tannery, the firm helped him to design two large concrete tanks each of 5,250 cu. ft. capacity. Compressed air mains were connected to the bottom conical orifices of these tanks.

The tannery effluent is pumped into the tanks and mixed with chloride of lime and chromate salts. The mixture is agitated

for six hours by compressed air. The mixture is left to settle until the cone of the tanks is filled with precipitate and the water above is odourless and pure. Precipitation period is between one and two hours. The compressed air not only agitates the water/chemical mixture, but also provides oxygen for complete oxidation.

After settlement, the purified effluent is piped off to the sewage main and the precipitate stored in an underground tank and removed periodically for dumping in an unpopulated part of the countryside outside the city.

The air is conveyed from the air receiver to the tanks by a ½in. pipe ending in a ½in. copper hoop (one inside each tank) perforated with eight 4 mm. holes.

A contract valued at approximately £11,500 has been awarded to William Boby and Co., Ltd., Rickmansworth, Herts., by Foster Wheeler Co., Ltd., for a hot lime-base exchange plant and de-aerator to be installed in the Tideway oil refinery, near Copenhagen.

SWISS TO PLAN £A3M. ALUMINIUM PLANT

A Swiss firm will assist in a £A3m. expansion of Australia's aluminium smelting works at Bell Bay, Tasmania. New plant will step up production of aluminium ingots from 12,000 tons to 16,000 tons.

Under an agreement between the firm, Aluminium Industrie Aktien Gesellschaft, and the Australian Aluminium Production Commission, signed in Zurich, the Swiss company will supply designs for extra plant and technical advice. The additions, to include modern electrical furnaces, will take about three years to complete.

FOUNDRY PLANT FOR CZECHOSLOVAKIA

Stone-Wallwork, Ltd., a member of the Stone-Platt Group, London, have secured a contract worth over £100,000 for the supply of foundry equipment to Czechoslovakia.

The equipment includes fully automatic moulding, core making and shakeout machinery, to be installed in new tractor and automobile foundries in 1961 and 1962.

Men and Movements

MR. G. A. SMITH, managing director of John Smith (Keighley), Ltd., a subsidiary of Thos. W. Ward, Ltd., has, on medical advice, resigned his appointment. He will retain his seat on the board as a director in a consultative capacity.

His successor is **Mr. Frederick Johnson**, a director of the associated company of Thomas Smith and Sons (Rodley), Ltd., who is taking over from Mr. Smith from September 1, as a director and general manager. **Mr. Charles Smith**, local director, has relinquished his appointment with the company and has retired due to ill health; **Mr. Cyril Bland**, local director, who has been associated with John Smith (Keighley) for many years as works manager, has been appointed to the full board and Mr.



F. JOHNSON



C. BLAND

E. C. W. SWANN

E. C. W. Swann, A.M.I.Struct.E., local director, engaged in the design and development of overhead cranes for the company, has been appointed to the full board.

Mr. J. W. Arnold has been appointed president and general manager of the Parsons Company, Newton, Iowa, a division of Koehring Co., Milwaukee. Mr. Arnold was vice-president in charge of manufacturing for the Hydraulic Press Manufacturing Co., another Koehring division, for five years before coming to Parsons in April of this year.

London Transport have appointed **Mr. G. C. Manly**, L.R.I.B.A., and **Mr. A. D. McGill**, A.R.I.B.A., principal executive assistants in the department of the architect, each with the title of principal assistant architect.

The Minister of Transport has appointed **Mr. J. R. Madge** to be his principal private secretary with effect from September 5, in succession to **Mr. J. Garlick**, who is being promoted.

Mr. J. L. Paisley, M.B.E., M.Eng., M.I.C.E., has been appointed divisional road engineer, north western division, in succession to **Mr. V. H. Haynes**, A.M.I.C.E., who has retired.

The British Road Federation has appointed **Mr. Geoffrey Palmer** as its public relations officer. Mr. Palmer was previously assistant information officer, British Sugar Corporation, and succeeds **Mr. Alan Havard**.

British Insulated Callender's Cables, Ltd., have announced the appointment of **Mr. J. Banks**, M.Eng., M.I.E.E., as chief engineer of the power cables division.

Mr. William R. Mills has joined Stanley Works (G.B.), Ltd., as general sales manager taking charge of those functions previously carried out by the sales director, **Mr. Warwick M. Dingley**. Mr. Dingley has taken up the new appointment of director of marketing in Europe for the whole of the Stanley Organisation, although he remains on the board of the British company.

The appointment of **Mr. John S. Whitworth** as manager of their shuttering department has been announced by the building equipment division of Scaffolding (Great Britain), Ltd. Mr. Whitworth has been closely associated with the building and civil engineering industries for a considerable number of years and has had wide experience in the shuttering field. He is primarily engaged in the development and extension of the SGB range of shuttering equipment.



J. S. WHITWORTH

Mr. J. E. Dayton, managing director of Alderton Construction Co., Ltd., has concluded a major partnership deal with Sheik Duaij al Salman al Sabah of Kuwait, and the photograph shows him with the Sheik during a recent visit to Kuwait. By the terms of the agreement, an Anglo-Arabian alliance is now in being to handle large-



scale civil engineering contracts, including airport construction, harbour development, bridge-building, etc. Alderton Construction will supply the technical knowledge in design and construction, and, where appropriate, supervisory control of operations. Sheik Duaij has important interests in the Middle East, including a civil engineering construction company.

Mr. J. Alcock has been appointed to the board of Midgley and Sutcliffe, Ltd., a member of the George Cohen 600 Group.

Mr. E. Rutherford Young has joined City Centre Properties, Ltd., as the company's chief surveyor. He was previously chief estates manager to the National Coal Board.

MUNICIPAL

Mr. Harry Benson Ansell, at present deputy county architect for the West Riding, has been appointed county architect to Hampshire C.C., and will take up his duties on December 12. He succeeds **Mr. Simpson Low**, who is retiring.

The new borough engineer at Bootle is **Mr. Thomas W. Crookdake**, previously borough engineer at Crosby for the last 10 years.

East Cornwall Water Board have appointed **Mr. J. S. Peebles** deputy engineer. He is at present with the Bedford water undertaking.

Mr. P. J. Moran has been appointed deputy borough surveyor at Cheltenham.

Mr. James McInnes, assistant county surveyor in Derbyshire, has been appointed county surveyor to Westmorland.

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13 per cent.; (b) moisture content of soil-cement—generally 5 per cent. to 9 per cent.; (c) thickness of processed layer—each compacted layer to be within $\pm \frac{1}{2}$ in. of that specified for the various layers and for the total thickness; (d) cement content—generally 8 per cent. but decided by the engineer; (e) field determination of dry density—compacted dry density of soil-cement to be not less than 100 per cent. of B.S. compaction test; (f) compressive strength of soil-cement (measured on four 2 in. diameter cylinders at seven days)—lower layer 150-500 lb./sq. in.—upper layer 350-600 lb./sq. in.—maximum coefficient of variation 30 per cent.; (g) regularity of surface—maximum tolerance in final surface of soil-cement $\frac{1}{4}$ in. in 10 ft., in final asphalt surface $\frac{1}{4}$ in. in 10 ft.; (h) analysis of asphalt constituents—by City Analyst; and (i) density control of asphalt—Marshall Test stability—1,500 lb. for base course—1,800 lb. for wearing course.

Construction work on the first phase of development was started in late March of

this year and is due to be completed this month. In general, the soil-cement stabilisation work has proceeded as anticipated in the site investigation, though a soil variation over about 800 ft. of the runway at the north-east end has involved the use of a third 6 in. layer to maintain bearing capacity and the increase of cement content from 8 per cent. to 10 per cent. in mix-in-place operations due to the presence of single-sized sandy patches.

The testing of the work has revealed a good control of mixing and compaction, the situation in the table below being reached after about two-thirds of the soil-cement work has been completed.

In order to maintain current knowledge of the control testing position and statis-

tical analysis of the test results, the evaluation of mean values, standard deviation and coefficients of variation, etc., has been carried out on the Corporation's I.B.M. 628 computer.

Contractors

The main civil engineering contractors are G. Percy Trentham, Ltd., the sub-contractors being: earthworks—Dick Hampton; soakaway shaft construction—McKinney Foundations, Ltd.; asphalt surfacing—Amey's Asphalt Co., Ltd.; surface markings—K. A. Brogden, Ltd.; and fencing and gates—Durofencing (Birmingham), Ltd.

The cost of the civil engineering work is £156,138.

Soil-cement	7-day cylinder strengths (see f) lb./sq. in.		Compaction factor % (see e)	
	Mean	Coefficient of variation	Mean	Coefficient of variation
Mix-in-place ...	398.51	22.7	104.75	3.5
Plant Mix ...	454.26	17.5	105.32	8.0

GLUED LAMINATED TIMBER CONSTRUCTION

Call for Higher Working Stresses

IF Britain is to develop glued laminated timber construction on a scale to match American development, engineers in this country must be prepared to assign higher working stresses to their timber.

This appraisal of prospects came from Mr. Verne Ketchum in the course of a talk given recently to an invited audience of wood technologists and engineers at the Royal Society of Arts in London. The meeting had been arranged by the Institute of Wood Science with the support of the Timber Development Association and the British Columbia Lumber Manufacturers Association. Up to the time of his retirement a few weeks ago Mr. Ketchum was for 23 years director of engineering with Timber Structures Inc., of Portland, Oregon.

Mr. Ketchum used colour slides to illustrate glu-lam applications in North America and to indicate the impact they have made on the architect of large industrial buildings, churches, assembly halls and homes. From these and from a documentary film "Buildings for tomorrow" which was shown after the lecture it was clear that American glu-lam construction is impressive not merely by the size of operations but also by the imagination evident in the design of structures and by the technical feat of producing them economically.

Standards Compared

Comparing American and British standards Mr. Ketchum said that U.S. glu-lam engineers worked with stresses of up to 2,600lb. per sq. in., whereas at present designers in this country went no higher than 1,600lb. The American Institute of Timber Construction had established that higher stresses can be assigned to glued laminated timber than to timber used straight from the tree. The lecturer stressed the importance of quality control and standards, pointing out that low moisture content, good glue and limited as

well as correct glue-spread were vital considerations.

Discussion

At question time Mr. Ketchum was asked about the relative merits of Pacific Coast Hemlock and Douglas Fir for glued lamination work. He replied that fir was used almost exclusively by Timber Structures Inc. Hemlock he described as a fine timber, lower in price and of more attractive appearance than fir. It was not, however, quite as strong as fir and the need to use extra laminations involving more scarf jointing and extra glue cancelled out the initial saving. Questioned about the importance of knots in glued laminated construction—Mr. Ketchum emphasised that the technique itself merely reduced the strength loss associated with them. If the dispersal of knots was achieved in laying up the laminations the knot or knot hole was limited in effect to a single lamination.

In a later discussion about preservative treatments Mr. Ketchum said he did not advocate water soluble preservatives for treating timber after fabrication. Such preservatives as well as fire retardants were normally used to treat laminations before they went to the cramping bed. Inevitably there was waste as the high proportion of the treated wood was hidden after assembly. Glu-lam members could be satisfactorily treated with creosote or with oil borne chemicals after fabrication.

TROPICAL BUILDINGS STUDY

The Department of Scientific and Industrial Research have published their second study on tropical buildings. Entitled "Buildings for the Storage of Crops in Warm Climates," it is written by W. H. Ransom, and is designed to guide the builder in the construction of buildings that will permit the storage of crops without deterioration.

Principles of design are examined and notes given on materials of construction.

A CLASH OF EXHIBITION DATES

To the Editor of "The Contract Journal."

Sir—The formation of a company to promote the new International Construction Equipment Exhibition to be held for the first time at the Crystal Palace next June, lists the organisations which have combined to sponsor the project.

Are these sponsors and their executive organisation, Construction Equipment Exhibitions, Ltd., aware that the choice of June 15-24, 1961, clashes with the Building and Public Works Exhibition to be held at Castle Bromwich?

Distributing and sales organisations are responsible to their principals for proper exhibition of their products and not unnaturally exhibitors are influenced by the nature of the sponsoring organisations of any particular show. In this particular case we learn that the National Federation of Building Trades Employers are sponsoring both the Castle Bromwich and Crystal Palace Exhibitions and most exhibitors are aware of the support given by members of that Federation to another important exhibition, the Public Works and Municipal Services Exhibition at Olympia in November every other year.

Do these organisations appreciate that responsible distributors are now faced with the necessity of exhibiting at three major exhibitions within six months and that this situation looks like going on to include the Building Exhibition which alternates with the Public Works at Olympia?

The increased costs, the diffusion of effort and the problem of manning these simultaneous exhibitions is a very real one and it is about time that responsible organisations got down to the problem of minimising costs in an industry which is always complaining about them.

Yours etc.,

J. A. ELLIS,

Division Manager.

H. A. Saunders, Ltd.,

Industrial Tractor Division.

VOLTA RIVER PROJECT

Loan to Ghana

Ghana Government have announced that they have received firm assurances from the World Bank and the Governments of the United States and Britain of a £30m. loan for construction of the Volta River Dam as soon as a satisfactory agreement has been reached with a consortium which will put up a smelter at Tema. The Ghana Government will themselves provide another £30m. for the dam.

The Volta dam and irrigation works will be built primarily to provide power for the smelter. The predominantly American-owned consortium Valco (the Volta Aluminium Company) has already undertaken some of the preliminary surveys for the scheme.

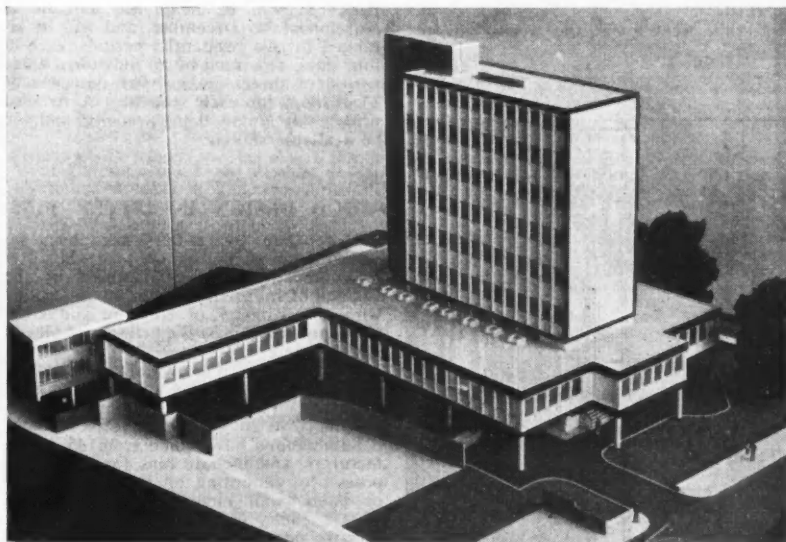
F.M.C.E. BURSARY

The F.M.C.E. Bursary in the Graduate School of Highway and Traffic Engineering at Birmingham University for the 1960/61 session, has been awarded to Mr. J. G. Brand, town engineering, Windhoek Municipality, South West Africa.

(Concluded from page 1041)

on the part of the engineer and say that no certificate, in any real sense of the word, had been issued.

While of course this case turns on the I.C.E. General Conditions, the R.I.B.A. Form's arbitration clause allows similar immediate reference to arbitration for the withholding of a certificate. Until, therefore, the view is challenged one may perhaps take it that this case applies to the R.I.B.A. Form's arbitration clause as well.



A model of Essex River Board's eight-storey headquarters building which, as reported last week, is to be erected by Holland & Hannen and Cubitts (Great Britain), Ltd., at Springfield Road, Chelmsford. Work on this £290,000 contract is due to commence on September 5, and is scheduled for completion in 18 months. The architects are E. R. Collister and Associates

Talking of Safety

by
"DRAGEE"

THERE is a film, well known to safety workers in our industry, which depicts, in one amusing incident, the antics of a labourer hauling a load of bricks up the outside face of a building by means of a rope and pulley. The receptacle is a wicker basket, of the type commonly seen on building sites many years ago; but this one is now a very battered object—fit for the scrap heap.

We see the basket being raised: it is crammed full of bricks piled well above the sides, and, to complete the picture, the rope is attached to the handle of the basket by means of one of those home-made hooks of the "bent pin" variety. When the basket meets an obstruction, the stubborn fellow at the bottom tugs at the rope, and one or two bricks are dislodged, falling near his feet. He glares at the bricks and his lips mutter familiar oaths.

When the basket meets the next obstruction, a vicious tug at the rope straightens the flimsy hook, and down comes basket, bricks and all.

This never fails to get a good laugh, but the fact is that an accident of this kind is not by any means a rarity. Despite the advent of the platform hoist and the little motorised scaffold crane, gin wheels are still seen about the sites, usually hauling up the odd load of materials in some out-of-the-way place. And it is the very casual nature of such contrivances that leads so often to serious trouble.

On one building job I visited recently a scaffolder had slung a gin wheel from a short horizontal scaffold tube connected to one of the main uprights. In order to resist the tendency to rotate at the joint, he had fixed a short raker tube between the horizontal and the vertical members—rather in the style of a gibbet.

"That's what the regulation says," Len, the scaffolder told me.

"What does it say?" I asked.

"That the horizontal support must be connected at two points. That's to stop it turning," he added, helpfully.

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

I pulled a tattered copy of S.I. 1145 out of my pocket, and pointed to regulation 42. "That's quite right as far as it goes," I said. "But you didn't go far enough. Part (d) of this regulation says that if the pole is secured only to a scaffold, it must be secured to at least two standards or extension poles."

"But with this raker bracing it can't possibly move," Len objected.

"Not in the way you mean, I agree. But if you imagine a pretty heavy load on the tackle, you'll realise that you're producing a severe bending effect in the upright—and that's where failure might occur. Especially if you're using a power lift. All right—I know you're not in this case, but the regulation doesn't know, and it's got to provide for all contingencies. I think you should get that put right pretty soon."

"No trouble there," said Len.

"I'm pleased to see you've moused the supporting hook of the gin wheel. That's also a legal requirement, of course. Another way of supporting the wheel is by providing it with a swivel-type eyebolt. This can be put onto the tube and held in place by means of a scaffold clip on either side. Another arrangement which I examined lately was a short sleeve fitted with a set-screw for sliding onto the supporting tube. An egg link was welded on to the sleeve, and this in turn was connected by means of a shackle to an eyebolt on the bridle of the gin wheel. That was for a heavier type of wheel, and we're getting some in stock."

"You'll see we've got a safety hook on the lifting rope," said Len.

"Yes, I noticed that—an essential feature with this kind of appliance. But just in case of trouble I like to see the operator wearing a safety helmet—and that goes for any man who works below a moving load."

"I always thought that gin wheels and things like that had to be marked with the safe working load and an item number, but our gin wheels never seem to be," said Len.

"That only applies where the tackle is used for loads of at least one ton. As you know, our gin wheels are only used for hand lifting, so they wouldn't have to be marked."

"Well, what about the weekly inspec-

tion—is that only needed where you have a load of a ton or more?"

"No," I said, with a sinking feeling. I could guess what was coming.

"Then how do you keep a record of the inspection if you haven't got a reference number of the item?" pursued Len.

"If you have more than one in use on the site they should be marked for identification purposes," I said. "But you've raised a good point there and I'll take it up with our Plant Manager at the first opportunity."

As the result of this little conversation, each of our gin wheels is now marked with an identification number and a warning notice to the effect that the capacity of the appliance is limited to 15 cwt.

BILSTON TOWN CENTRE REDEVELOPMENT

A scheme for the compulsory purchase of the entire town centre and having it redeveloped by a private corporation has been approved in principle by Bilston B.C.

Estimated to involve £5m. or £6m. the project would involve the demolition of 120 shops and the town hall, and the erection of 200 shops in a traffic-free centre, a municipal centre, offices and flats. The Murrayfield Real Estate Co., Ltd., Edinburgh, would lease the land from the council for 99 or 121 years. They are being asked to prepare estimates of costs for further consideration.

A.E.E., WINFRITH, OPEN TO INVITED VISITORS

On September 16 and 17, the Atomic Energy Establishment, Winfrith, will be open to invited guests from private and nationalised industry, government departments and laboratories, universities and research associations and the area surrounding the Establishment. On these days all the major laboratories and plant at Winfrith will be shown to visitors including those of the O.E.E.C. Dragon Project.

DESIGN APPRECIATION COURSE FOR ENGINEERS

The Council of Industrial Design are arranging a course in design appreciation for apprentices and junior engineers from both light and heavy engineering industries. It will be held near London in November and December, and will be arranged in two residential periods, each of four days, separated by an individual study period of three weeks. The cost will be 35 guineas for each student. A detailed programme is now being prepared and will be available shortly.

GOOD DESIGN IN LITTER BINS

More than 100 entries have been received from manufacturers for the litter bin competition being organised by the Council of Industrial Design, in association with the Ministry of Housing and Local Government and the Department of Health for Scotland.

An exhibition of the winning designs will be held in the Victoria Embankment Gardens (Whitehall Section), from October 6 to 20.

Submissions have come from 45 manufacturers, and include bins for many purposes—for mounting on lighting columns or poles, wall mounting, free standing, large capacity bins for lay-bys, etc., and prestige advertising bins for special locations. The materials used are also varied—iron, aluminium, steel (sheet and tubular), stone, plastics, concrete, fibre-glass, expanded metal, wood, paper and asbestos, cement—in several cases materials new to the firms using them.



"Now you can see why you should wear a safety helmet!"

NOTTS. GREAT NORTH ROAD IMPROVEMENT

THE original scheme for the improvement of the Great North Road between Cromwell and Markham Moor, Notts., has been revised to provide for an entirely new route by-passing Sutton-on-Trent, Weston and Tuxford, and a Ministry of Transport order will shortly be made authorising the realignment.

Previously, plans for the improvement called for duplication of carriageways on the existing route, with a short by-pass at Tuxford and diversions elsewhere. With the change in design standards for the Great North Road over the last few years, it is now essential that access from side roads should be restricted and that right turns should be eliminated, and this cannot be achieved using the existing road.

The new scheme is not expected to add to the cost, and will involve less demolition of property. Another advantage will be the very little dislocation of traffic during construction.

CANADIAN TIMBER TRADE MISSION TO U.K.

A Canadian timber trade mission is to visit the United Kingdom and Republic of Ireland in October in order to stimulate the demand for Canadian timber, plywood and other wood products. Mr. Gordon Churchill, Minister of Trade and Commerce, Ottawa, has said the purpose of the mission is to study changing conditions in these markets and to examine the effectiveness of production marketing and sales promotion methods as they affect Canada's timber exports.

The mission will comprise 12 leading exporters from the Atlantic Provinces, Quebec, Ontario and British Columbia.

PORT GLASGOW ROAD PLAN

Proposals for a new road through Port Glasgow to replace the present A.761 to Glasgow are being submitted for the approval of the Scottish Home Department. The new road will eliminate a number of dangerous corners and will involve the demolition of a church manse, two private houses, the old toll house, a doctor's surgery, and a café. Estimated cost of the scheme is £271,850.

ASSOCIATION OF PUBLIC LIGHTING ENGINEERS

Annual Conference at Folkestone

THE annual conference of the Association of Public Lighting Engineers this year is to be held at Folkestone from September 13-16. Following the opening of the conference by the Mayor of Folkestone, the new president, Mr. F. C. Smith, M.B.E., F.C.S., M.Inst.Gas.E., F.I.E.S., will be inducted and then present his address.

"The Changing Scene"

The theme of the conference is "The Changing Scene" and Papers relevant to the subject will be presented in The Leas Cliff Hall during the course of the proceedings. A new venture in the programme is the short Open Forum. A small panel of experienced representatives from varying quarters will be available to deal with questions on street lighting problems of the kind which from time to time confront members of highways and lighting committees, borough engineers and lighting engineers. It is envisaged that an Open Forum on these lines will assist delegates and enable them to raise questions on matters of street lighting, of the type which it might not be possible for them to do in the discussions which follow the delivery of the conference Papers.

Exhibition and Outdoor Displays

Other important attractions for the delegates will be the exhibition of street lighting apparatus and equipment being held in Langhorne Gardens, opposite the conference hall. Here, framed tents are being specially erected covering an area of 10,000 sq. ft. of which approximately 7,500 sq. ft. is being used for stands for the participants in the exhibition.

In the outdoor display of lamp columns to be held on sites along The Leas, there will be shown 120 columns of varying design, manufacture and composition.

CATHEDRAL DESIGNS AT BUILDING CENTRE

The designs in the architectural competition for the Liverpool R.C. Cathedral are now on view at The Building Centre, 26 Store Street, London, W.C.1, until Saturday, September 17. Monday to Friday, 9.30 a.m. to 5 p.m. Saturday 9.30 a.m. to 1 p.m.

GLAMORGAN COLLEGE EXTENSION TO COST £230,000

GLAMORGAN County Council have awarded a contract worth £230,000 to J. Gerrard and Sons, Ltd., of Swinton, Lancs., for the building of extensions to the Glamorgan College of Advanced Technology at Treforest, Pontypridd.

The work, which will take two years to complete, will comprise the construction of two extensions to the north and south ends of the existing School of Mines together with an independent boiler house. The south extensions will be an administration block and the north extension a teaching and chemical engineering block.

Traditional Structure

The administration block will be a traditional structure with steel frame encased in concrete, brick cladding, hollow tile floors and patent roof decking. The building will be on three levels consisting of lower ground floor, ground floor and first floor rising to a maximum height of approximately 40ft. above ground level with a basement of 6ft. below ground level.

The teaching block will be a three-storey building in traditional style rising to a maximum height of approximately 35ft. above ground level, with reinforced concrete frame, brick cladding, hollow tile floors and patent roof decking. The chemical engineering block will be a single storey, again traditional, with a 50ft. tower and a steel frame with brick and asbestos cladding and patent roof decking.

The extensions have been designed by the Glamorgan county architect, Mr. E. A. E. Evans, and the quantity surveyors are Davis, Belfield and Everest, of Newport, Mon.

COOLING TOWER CONTRACT FOR HEAD WRIGHTSON

Head Wrightson Processes, Ltd., have been awarded a contract for the supply of three induced draught cooling towers for the new Spencer Works of Richard Thomas and Baldwins, Ltd.

These towers, which have a total capacity of over 1,800,000 gallons of water per hour, will be used for supplying cooling water to the hot and cold strip mills for the finishing section of the plant. The towers will be built to a special design developed by Head Wrightson and John Laing and Son, Ltd.

FOR THE DIARY

Sept. 8

Meeting of the Southern Counties branch of the Contractors Mechanical Plant Engineers, The Surrey Arms, Morden Road, Morden, 7.30 p.m. Film show.

"Highway Developments in the U.S.A." Meeting arranged under the auspices of the Institution of Highway Engineers, Friends' House, Euston Road, London, N.W.1. 10 a.m. to 5 p.m.

Sept. 11

International Trade Fair at Brno, Czechoslovakia. Sept. 11-25.

Sept. 13

Eighth annual residential study course arranged by the South-Western District of the Institution of Municipal Engineers. Dillington House, Ilminster, Somerset. Sept. 13-15.

Annual conference of the Association of Public Lighting Engineers, Folkestone. Sept. 13-16.

Sept. 14

Meeting of the Glasgow branch of the Contractors' Mechanical Plant Engineers, Mores' Hotel, India Street, Glasgow. 7.15 p.m. Film show.

Meeting of the Western Branch of the Institution of Plant Engineers, Royal Clarence Hotel, Exeter. 7 p.m. Film and talk on the construction of the M.1 Motorway.

Sept. 16

Meeting of the Birmingham branch of the Institution of Plant Engineers, Imperial Hotel, Birmingham. 7.30 p.m. Mobile Plant Discussion Group.

Annual meeting of the North Western District of the Institution of Municipal Engineers at the Town Hall, Rochdale, 11.30 a.m.

Sept. 21

Conference of the British Waterworks Association, Edinburgh. Sept. 21-23. Factory Equipment Exhibition, Belle Vue, Manchester. Sept. 21-Oct. 1.

Sept. 23

Commercial Motor Show, Earl's Court, London, Sept. 23-Oct. 1.

Sept. 27

Meeting of the Mid-Southern branch of the Contractors' Mechanical Plant Engineers, The George Hotel, King Street, Reading. 7.30 p.m. Film show.

Sept. 30

Meeting of the Metropolitan and Southern branch of the Institute of Sewage Purification, Friends House, Euston Road, London, N.W.1. 6.30 p.m. Discussion—New and Pending Legislation—introduced by J. L. Spiller.

Oct. 3

Conference of the institute of Quarrying, North British Hotel, Edinburgh, Oct. 3-6.

Oct. 6

Convention on Parking arranged by the Institution of Municipal Engineers at Central Hall, London, 10 a.m.

Oct. 10

Meeting of London branch of the Institution of Plant Engineers, at the Royal Society of Arts, John Adam Street, London, W.C.2, at 7 p.m. An international Paper "Plant Engineering on the Continent."

Oct. 11

Building Trades Exhibition, City Hall, Deansgate, Manchester, Oct. 11-22. Annual dinner of the Contractors' Plant Association, Dorchester Hotel, London. 7.30 p.m.

Meeting of the Birmingham branch of the Institution of Plant Engineers, Hotel Leofric, Coventry, at 7.30 p.m. Talk on "Modern Air Compressors and Equipment."

Oct. 13

Twenty-first national conference of the Council for the Preservation of Rural England, Pavilion, Weymouth. Oct. 13-15.

Oct. 14

Annual dinner and dance of the Institute of Quantity Surveyors at the Trocadero Restaurant, London, W.1.

Oct. 18

Effluent and Water Treatment Exhibition and Convention, Seymour Hall, London Oct. 18-21.

Trade Section

NEW COMPANIES

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

C. Finch (Builders), Ltd., 161 Manchester Road, Burnley. £100. Directors: Clifford Finch and Mrs. Margaret M. Finch, 161 Manchester Road, Burnley.

Hereford Land Drainage Contractors, Ltd., 27 Holmer Road, Hereford. £100. Directors: Alfred W. Page, 5 Church Street, Hesford; Mrs. J. P. Morris, 27 Holmer Road, Hereford.

Hooper Bros. (Builders), Ltd., 6 The Parade, Exmouth, Devon. £1,000. Directors: Mabel I. Hooper, 40 Danby Terrace, Exmouth, Devon; Leonard F. Nicholass, 30 Seynour Road, Exmouth, Devon.

Jonas Bros., Ltd., 14 Adelaide Road, Leamington Spa, builders. £1,000. Directors: Spencer J. C. Jonas, 25 Henley Road, Whitnash, Leamington Spa; Barrie I. Jonas, 14 Adelaide Road, Leamington Spa; Thos. M. Tonkins, 5 Redland Road, Whitnash, Leamington Spa.

Keyphalte Surfacing Co., Ltd., 218 Blackfriars Road, S.E.1, road and highways constructors. £100. Directors: Eric J. Estermen, 1 Greycoat Gardens, S.W.1; Donald Keeble and Mrs. B. C. Keeble, 87 Heyter Road, Brixton Hill, S.W.2.

Saville Fletcher (Builders), Ltd., 22 Cole Valley Road, Birmingham, 28. £100. Directors: John D. Saville, 250 Highfield Road, Birmingham, 28; Frederick Fletcher, 22 Cole Valley Road, Birmingham, 28.

C. A. Jenner and Sons, Ltd., 51 The Mall, Ealing, W.5, builders. £1,000. Permanent directors: Charles A. Jenner and Mrs. D. E. Jenner, Grangewood, Penn Drive, Denham, Bucks.

Cooks of Crawley, Ltd., 20 Springfield Road, Crawley, Sussex, builders. £6,000. Directors: Brian Place, Wilmington House, East Grinstead, Sussex; Rowland J. Llewellyn, 22 Carfax, Horsham, Sussex; Reginald C. Simmonds and Leslie F. G. Allan.

A. M. Farnell, Ltd., builders. £1,000. Directors: Not named. Subscribers: A. M. Farnell, 64 Stafford Road, Bloxwich (surveyor); Mrs. P. E. Proud, 34 Ogley Hay Road, Chase-town, Walsall.

Braywater, Ltd., 150 Asylum Road, S.E.15, builders. £100. Directors: Brian E. Broom, 10 Lansdowne Lane, S.E.7; John H. Haynes, 54 Minard Road, S.E.6; Alan W. Waterman, 66 Upper Walthamstow Road, E.17.

Mitchell-Thompson Building and Construction Co., Ltd., 23 Philpot Lane, E.C.3. £1,000. Directors: James Mitchell-Thompson, 1 Gayville Road, S.W.11; Wm. Murray, 27 Park Road, W.3.

Symons and Son (Builders), Ltd. £6,000. Directors: Wm. A. C. Symons and Mrs. Marjorie R. Symons, The Gables, Eastacombe, Newton Tracey.

C. R. Ball, Ltd., 87 Blue Bell Lane, Huyton, Liverpool, builders. £100. Directors: Clarence R. Ball and Ivy Ball, 87 Blue Bell Lane, Huyton, Liverpool.

J. Pearson and Son (Builders), Ltd., 27 Lordsome Road, Morecambe and Heysham, Lancs. £2,000. Directors: John Pearson, Mrs. Minnie Pearson and Jim Pearson, 27 Lordsome Road, Morecambe and Heysham, Lancs.

R. W. Chandler and Son (Builders), Ltd., 89 Widford Road, Chelmsford, Essex. £20,000. Directors: Oliver R. Chandler and Mrs. Winifred M. Chandler, 89 Widford Road, Chelmsford, Essex.

Walters and Weston, Ltd., 5 Osborne Villas, South Street, Crowborough, Sussex, builders. £100. Directors: Patrick J. D. Walters, 5 Osborne Villas, South Street, Crowborough, Sussex; Desmond W. Walters, 2 Roydon Cottages, New Road, Crowborough; Colin G. Walters, Basil G. Walters, and Arthur F. Weston.

L. G. Turl and Sons, Ltd., Turl's Workshops, Denver Road, Topsham, Devon, builders. £1,000. Directors: Leslie G. Turl, 46 Ashford Road, Topsham, Devon; Owen J. Turl, 5 Underhill Terrace, Topsham, Devon; Mrs. Gwendoline M. Turl, 46 Ashford Road, Topsham, Devon.

Maidstone Contractors, Ltd., civil engineering and public works contractors. £2,500. Permanent directors: John McHale, 3 Meadow Walk, Maidstone; Christopher McCarthy, 22 County Road, Maidstone; Wm. R. Manser, 2 South Street, Barming, near Maidstone.

K. I. Snook and Co., Ltd., builders. £1,000. Directors: Kenneth I. Snook and Mrs. Doris E. Snook, Witterings, Stoke Common, Bucks.

W. A. Belsham and Son, Ltd., 9 Grassington Road, Sidcup, builders. £500. Directors: William A. G. Belsham, Ivy Cottage, Perry Street, Chislehurst; Mrs. Florence Belsham, Barnston, Grassington Road, Sidcup.

Swimming Pools (Construction and Filtration) Ltd., £10,000. Directors: Edward G. L. Godden, Stanwell Cottage, Stanwell, Staines; Hugh W. Gibson, Suncroft, Devenish Road, Sunningdale; William M. Stephen.

Bailey Lucas, Ltd., civil engineers. £5,000. Directors: Harry Bailey, 47 Bennetts Road South, Coventry; Herbert Lucas, 190 Bennetts Road South, Coventry.

TRADE NEWS IN BRIEF

Mercantile Credit Co., Ltd., have opened a new office at 69 Stricklandgate, Kendal. The address of their Liverpool office has been changed to Castle Chambers, Castle Street, Liverpool.

Thermoplastic Tiles on Floor Heating Systems is a new booklet by F. L. Brady, formerly of the Building Research Station and now technical director of the Marley Group. Copies are obtainable, gratis, from The Marley Tile Co., Ltd., Sevenoaks, Kent.

From The British Steel Piling Co., Ltd., 10 Haymarket, London, S.W.1, a leaflet describing the operation of McKiernan-Terry diesel pile hammers.

From Booth and Co. (Steel Structures), Ltd., Vincent House, Dorking, Surrey, a copy of a booklet giving details of the Met-Ram structural system.

A further performance bulletin on their Detel E/P paint (epoxy-pitch) has been published by Detel Products, Ltd., Stonefield Way, Victoria Road, South Ruislip.

Rainham Timber Engineering Co., Ltd., have entered into an agreement with Nemah, N.V., of Doetinchem, Holland, for the mutual exchange of experience and knowledge.

John Hall and Sons, Ltd., Bristol, 4, have issued a new leaflet dealing with tests on their co-polymer based emulsion paint, Brolac P.E.P.

The Gyradisc crusher for the production of large tonnages of fine material is described in a new bulletin, released by Nordberg Manufacturing Co., Milwaukee, Wis.

United Dominion Trust, Ltd., Eastcheap, London, E.C.3, have issued a new illustrated brochure to describe the wide range of commercial and industrial purposes for which the Group provides finance and to give details of the capital structure and financial history of the company since it became public in 1925.

John Williams of Cardiff, Ltd., have transferred their metal window division to new and larger premises at Curran Road, Cardiff. Tel: Cardiff 37131.

Henry Boot and Sons (Plant), Ltd., Dronfield, Sheffield, have been appointed main stocking dealers for the John Deere Lanz industrial equipment.

Ramsel Fasteners, Ltd., have opened a Northern Area sales office at Block A, Waterloo Works, Gorsey Mount Street, Stockport, Cheshire. Tel: Stockport 5581. Mr. Alan Horne has taken over as sales manager in Manchester.

Coseley Buildings, Ltd., Lanesfield, Wolverhampton, have produced the first of a new series of leaflets, describing latticed steel portal frame buildings.

A revised edition of their Maintenance Welding Data Book has been published by Eutectic Welding Alloys Co., Ltd., North Feltham Trading Estate, Feltham, Middx., and is available through the firm's technical consultant service.

Drabble and Sanderson, Ltd., Sheffield, have been appointed sole agents in the U.K. for the sale of carbide tipped circular saws manufactured by the American Saw and Tool Company of Louisville, U.S.A.

Hall and Co., Ltd., Great West Road, Brentford, Middx., have taken over the distribution of small quantities of Foamed Slag lightweight aggregate on behalf of Foamslag (Distributors), Ltd. Delivery can be made within 12 miles radius in 24 hours.

Michelin Tyre Co., Ltd., have added a branch sales office to their depot at Garth Street, Adamsdown, Cardiff.

United Dominions Trust's branch office in Guildford has been moved to new premises at Norfolk House, Upper High Street.

G.E.C. STREET LIGHTING EXHIBITS

SEVERAL new items of street lighting equipment are being exhibited at this year's Association of Public Lighting Engineers Conference by General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2.

Three lanterns designed for higher mounting with wider spacing are being shown. The first, introduced last year, uses the high power Osram 200-W linear sodium lamp. The other two are both mercury lamp lanterns, one having an Osram 250-W or 400-W MBF/U lamp with cut off distribution and the other, with a decorative appearance, incorporating three 250-W MBF/U lamps.

Another lantern, using 250-W or 400-W mercury lamps, is intended for area or space lighting. Also in the main road section, there will be a new post top mounting decorative lantern employing four Osram 5ft. fluorescent tubes.

Five new lanterns for side road lighting will be displayed. One, housing a horizontally burning mercury or tungsten lamp, has the feature of a shallow dish refractor with horizontal prisms, enabling the lantern to be made in a more compact size.

A small lantern, capable of providing a variety of optical systems, will be shown, together with three new side road fluorescent lanterns. One of these houses two Osram 40-W tubes, the second four 3ft. tubes and the third a single 80-W tube burning vertically.

For the first time, main and side road columns manufactured in aluminium will be on view, and an important exhibit in the sodium lamp range will be the experimental 4ft. linear sodium lamp which, it is stated, enables higher intensities to be achieved more economically in street lighting.

LAMINATED PANELS OF GLASS FIBRE

Architectural panels of laminated glass fibre and polyester resin, self-coloured and embossed or recessed in a decorative finish, are now being produced by Glass Fibre Developments, Ltd., 79-81 South Coast Road, Peacehaven, Newhaven, Sussex.

Four patterns are at present available. There are two types of reeded panel, the surface section being either convex or concave and spaced at $\frac{1}{4}$ in. centres, and two others of different pattern.

A block of flats recently completed on the sea front at Hove employed the panels for infilling on wrought-iron balcony surrounds.

METAL FINISHING EXHIBITION

What is probably the world's largest display of metal finishing products and services will be seen at Olympia, from November 29 to December 2, when the Corrosion and Metal Finishing Exhibition is opened by Sir Alexander Fleck, president of the Society of Chemical Industry.

A feature of this year's Exhibition will be technical meetings arranged by the Plastics Institute and by the corrosion group of the Society of Chemical Industry. There will also be technical films dealing with various aspects of corrosion and metal finishing.

CZECHOSLOVAKIA TRADE FAIR

With 35 British firms exhibiting at the second International Trade Fair at Brno, Czechoslovakia, British representation has increased by about 30 per cent., although it is still far below that of West Germany.

British firms exhibiting include Hilger and Watts, Ltd.; Holman Bros., Ltd.; United Construction Machinery Co., Ltd.; and Massey-Ferguson (United Kingdom), Ltd. The Fair will be held from September 11-25.

Trade Section

ROBERT HUDSON LAUNCH LEEDSALL DUMPER TRAILER

THE new hydraulically operated 7 cu. yd. Leedsall dumper trailer has been designed by Robert Hudson, Ltd., of Leeds, for use with the Fordson Major tractor and similar units.

The tractor-trailer combination has been designed to give a high all-round performance and has a unique type of draw-bar linkage which permits complete articulation in all directions with a 90 degree swing in either lock. The draw-bar, which is subject to patent application, allows the tractor-trailer combination to articulate within the stability of each unit, and gives a turning circle of 30ft.

It is stated that the design of the draw-bar universal coupling makes for compact overall length and wheelbase dimensions and also eliminates excessive torsional stresses when the outfit is under full lock and fully articulated in any plane.

The body is in $\frac{1}{4}$ in. steel plate, fabricated and welded throughout and is further reinforced by $\frac{3}{8}$ in. thick press-brake formed channel section stiffeners. Struck capacity of the body is 5 cu. yd., heaped capacity is 7 cu. yd., and the load capacity 10 short tons (20,000lb.).

The chassis is of heavy section "A" frame construction, formed from 9 in. by 3 in. rolled steel channel. The wheels of the trailer are fitted with 1400 x 24, 12-ply rear tyres of the earthmoving type, and have cast steel hubs, taper roller bearings and Girling air brakes fed by a compressor which is mounted on the tractor.

The overall length of the combination is 22ft. 10 in., wheelbase from the tractor rear axle to the dumper axle being 12ft. 3 in. The height of the body is 8ft. (11ft. 8 in. in the dump position) and the overall width over the rear tyres is 7ft. 6 in.



7 cu. yd. Leedsall dumper trailer

VIBRATING EQUIPMENT JOIN E. P. ALLAM GROUP

E. P. Allam and Co., Ltd., announce that Vibrating Equipment Co. have joined the group. Mr. Letts, the principal of Vibrating Equipment, will take up an appointment with E. P. Allam for the purpose of developing the range of industrial vibrators, vibrating screens, feeders, etc.

It is stated that the amalgamation will in no way affect the existing types of vibrators made by both companies, but, in due course, the Vibrating Equipment Co. factory will be used for spares, service and hire, while the manufacture of vibrators at present carried out by that company will be transferred to E. P. Allam's works at Eastwood.

SIMMONDS WELDNUTS

A new range of Welnuts, which have been specially developed for all types of projection welding equipment, has been introduced by Simmonds Aerocessories, Ltd., Treforest, Pontypridd.

These Welnuts, in a variety of stock sizes, are manufactured from high quality low carbon cold forming steel to BSS EN 2A-28 tons min. U.T.S.

BRITISH NUCLEAR EXHIBITS AT STOCKHOLM

A number of working and display models of a nuclear nature will be included in the British section of the Fifth International Instruments and Measurements Exhibition at Stockholm next month.

The stand of the General Electric Co., Ltd., will include models of the Consort research and training reactor and of the Hunterston and Tokai-Mura nuclear power stations. Another model will explain the G.E.C. reactor design for ship propulsion.

A Perspex model of a tube-bank in a nuclear power station steam-raising unit will demonstrate G.E.C. leak detection equipment. Associated with this exhibit will be a scale model of one of the steam-raising units designed by Simon-Carves, Ltd. for the Hunterston nuclear generating station.

A scale model of the Berkeley High Activity laboratory will be shown by H. M. Hobson, Ltd., and scale working models of the Hobson-A.E.R.E. Honeycomb Isotope Unit and of the coarse control arm for the Hobson-A.E.R.E. control system for heavy water moderated and cooled reactors will also be on view.

LORRY MOUNTED CRANE ASSOCIATION

Rules of Membership

THE inaugural committee of the Lorry Mounted Crane Association have now established the rules of membership.

The Association set out to guarantee a minimum standard of insurance, safety and reliability. They will also endeavour to rationalise legislation regarding the use of lorry mounted cranes, it is stated. The Association, which will under no circumstances be concerned with the fixing of charges for hire of lorry mounted cranes, have already drawn up a standard form of minimum insurance cover. All members must comply with this although many do offer additional cover.

Every lorry mounted crane owned by a member must be registered with the Association and an approved inspector must have issued an inspection report certifying that the vehicle is in a safe mechanical condition. Thereafter, an inspection report must be produced every year.

Each lorry mounted crane is then supplied with a certificate, renewable annually, to be displayed in the windscreen of the vehicle so indicating that its condition is not lower than that required by law, and that it will be operated in accordance with the regulations.

Customers are invited to report inadequate registered machines to the Association who will then insist upon the members concerned producing evidence that their lorry mounted cranes have been returned to good order.

The Association have defined a lorry mounted crane as a crane mounted on a vehicle with a minimum of six load-carrying tyres and designed for road speed in excess of 15 miles an hour. The crane must be capable of slewing through a minimum angle of 30 degrees and its maximum safe working load must not be less than three tons.

Other objects of the organisation, whose headquarters are at 301 Glossop Road, Sheffield, 10, are to promote high standards in the practice of heavy lifting and to establish a minimum set of conditions of contract.

Members

The first members include: F. Gibson and Co. (Newcastle), Ltd.; John Griffiths and Son, Ltd., Liverpool; Chris. Miller, Ltd., Preston; Smiths Enterprises (Glamorgan), Ltd., Bridgend; Mobile Lifting Services, Ltd., Rotherham (a member of the Tarmac group); Thos. W. Ward, Ltd., Sheffield; Westfield Transport, Ltd., Mansfield; Wood, Pritchett and Partners, Ltd., London; Woodall-Duckham Construction Co., Ltd., Rutland; and John Young and Co. (Kelvinhaugh), Ltd., Glasgow.

METALIFE DUPLEX METAL COATING

A new coating for rustproofing iron and steel has been produced by Metalife Liquid Metals, Ltd., Station Square, Harrogate. Known as Metalife Duplex Metal Coating, it consists of a base and a solidifier which, it is claimed, give a coating exceptionally resistant to corrosion, abrasion, solvents and chemicals. It withstands temperatures from -65 degrees F. to 400 degrees F. dry heat and is non-toxic.

UNITED STEEL FILM WINS PREMIER AWARD

The United Steel Companies, Ltd., have gained the premier award at the Venice Film Festival with their film "Stone into Steel." Featuring the works of Appleby-Frodingham Steel Company, this colour documentary has no spoken commentary but the dramatic effect is heightened by a specially composed musical score.

Current Constructional Activities

PROJECTS • CONTRACTS • AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

BUILDING AND DECORATING

(See also Housing Schemes)

Ashford, Kent.—Co. E.C. recommended to approve the provision of a hatted day room at the Grammar School for Girls boarding hostel. Estimated cost £2,000.

Ayr.—Dean of Guild Court have approved the erection of 40 garages at Fenwickland Avenue, Belmont for B.C. Estimated cost £5,300.

Banstead, Surrey.—U.D.C. to prepare scheme for 30 garages at Tattenhams estate off Shawley Crescent.

Berkshire.—C.C. recommended to approve the completion of Windsor County Boys Grammar School as a three-form entry school. Estimated cost £79,760.

Berwick, Northumb.—B.C. have approved revised plan for flats to be erected in Woolmarket, for submission to the Ministry.

Beverley, Yorks.—Grammar school to be extended. Estimated cost £40,000.

Bexhill, Sussex.—B.C. have approved first two stages of scheme to improve and extend Egerton Park swimming bath. Estimated cost £13,475.

Bexley, Kent.—Co. E.C. recommended to approve the provision of new sanitary accommodation at Hook Lane County Primary School and the replacement in permanent construction of three fire-damaged practical rooms at Westwood Secondary Schools, estimated cost £3,000 and £23,000, respectively; approve, subject to Home Office approval, construction of a sectional building to be used as a Civil Defence training centre. £4,000.

Billingham-on-Tees, Dur.—J. S. Houghton, 57 High Street, Stockton-on-Tees, is the architect for shop and flat, Windlestone Road, for S. Shipley, Western Crescent, Norton-on-Tees.

Bishop Auckland, Dur.—Simpson and Co., Sunnyside House, Johnson Street, Eldon Lane, are to erect offices in Edward Street.

Blackburn, Lancs.—M.E. have approved the erection of a new technical and grammar school, for E.C.

Boldon, Dur.—Tenders are being obtained for the erection of new licensed premises for Scottish Brewers, Ltd., Edinburgh. The architects are Page, Son and Hill, 75 King Street, South Shields.

Bolton, Lancs.—E.C. recommended to approve adaptations at the College of Art. Estimated cost £4,000.

Bootle, Lancs.—B.C. to make provision for erection of a welfare centre in 1960-61.

M.E. have approved final plans for St. Augustine's R.C. Secondary School, for E.C. Estimated cost £207,042.

St. Andrew's Church, Stanley Road, to be rebuilt. Vicar Rev. T. F. Robinson. Estimated cost £15,000.

Bradford, Yorks.—City Architect has been instructed to prepare working drawings, etc., for new law courts and police headquarters to be erected in an extended Town Hall square.

Bridlington, Yorks.—B.C. have approved the construction of an open-air swimming pool on land of Limekiln Lane. Estimated cost £117,000.

Brighton, Sussex.—B.C. recommended to approve scheme for the erection of the first instalment of a primary school, including the provision of youth service facilities at Saltdean, estimated cost £25,000; replacement of toilet accommodation at Elm Grove School (secondary and junior departments), £11,350; erection of a public convenience at junction of Selham Drive and Beatty Avenue, Parkside estate, Coldean, £3,025; to prepare plans for the second instalment of new premises for the College of Art and Crafts, £185,450.

Canterbury, Kent.—Robert Matthey and Johnson-Marshall, 24 Park Square East, London, N.W.1, have been appointed architects, for the Church of England Training College.

Carshalton, Surrey.—U.D.C. to apply for sanction to borrow £1,250 for the construction of public conveniences in Royston Park.

Chatham, Kent.—Co. E.C. recommended to approve scheme for improvements to sanitation at Ordnance Secondary School for Girls. Estimated cost £2,000.

Chatham, Kent.—War Office have approved in principle the erection of new barracks for the Royal Engineers at Chattenden.

Chertsey, Surrey.—U.D.C. recommended to prepare scheme for the erection of a community centre at Addlestone. Estimated cost £15,000.

U.D.C. recommended to approve a site near the vicinity of the Chertsey car park for a municipal hall.

Chester-le-Street, Dur.—Work is expected to start shortly on the erection of a 58-bedroom motel for Highway Hotels, Ltd., Sunderland. The architects are Matkin and Hawkins, Barclays Bank Chambers, Fawcett Street, Sunderland. Estimated cost £110,000.

Chichester, Sussex.—Ministry have approved the erection of new bank premises on the site of the old bank in East Street, for Barclays Bank.

Chislehurst and Sidcup, Kent.—U.D.C. have approved plans for the Mottingham library.

Colne, Lancs.—B.C. have approved, subject to planning consent, modified proposal for the building of changing rooms, showers and bath, etc., at Holt House, for Colne and Nelson Rugby Union Football Club. Estimated cost £6,000.

Consett, Dur.—Alterations and additions are proposed to the Hamsterley Colliery Social Club. The architects are Southern and Toes, 217 Goldspink Lane, Newcastle upon Tyne, 2.

Cuckfield, Sussex.—R.D.C. have approved plans for a new pavilion for Ardingly Recreation Ground.

Cumberland.—Unilever, Ltd., are to erect a warehouse at Harker.

Schemes planned by the C.C. include the erection of a branch library and clinic at Seascale to cost £8,300; family unit home at Workington, £6,675; old people's home at Egremont; extensions to Millom School, £18,000; rehabilitation of Oulton C. of E. School, £8,300; extensions to Thornhill School, £7,500; completion of new school at Thursby, £14,000, and additions to school at Irthing Valley, £3,000.

Darlington, Dur.—M.E. have approved sketch plans for the proposed Branksome Secondary School for E.C. It is proposed to obtain a price for the Thermogard Mark III form of construction from Gardiner, Sons and Co., Ltd., Bristol; Borough Architect to prepare detailed plans for proposed new municipal buildings.

It is proposed to erect offices, showrooms, and greasing bay at the Burtree Garage, North Road (Clayton and Deas, architects, High Row Chambers); Dean and Chapter of Durham, The College, Durham City, are seeking permission to construct a motel at Great Aycliffe Village, near Darlington (the organisation's land agent is O. Carr); Larches Estates, Ltd., are to construct a supermarket at Northgate, and outline approval has been given (agents for the promoters are Hillier, Parker, May, and Rowden, 77 Grosvenor Street, London, W.1).

Didcot, Berks.—Parish Council recommended to submit to the Co. Planning Authority for approval, plan for a swimming pool.

Doncaster, Yorks.—Home Office have approved the erection of self-contained headquarters for Doncaster Auxiliary Fire Service. Estimated cost £10,000.

Dover, Kent.—Roman Catholic Authorities propose the erection of the first stage of a primary school off Stanhope Road. Estimated cost £20,000.

Durham.—City Council have approved plans by Durham Colleges to provide accommodation for an extra 22 Hatfield College students, plus flats for tutors and norters.

Plans are being prepared by Cordingley and McIntyre, Owengate, Durham, for proposed extensions to dining hall and kitchen at Durham School.

East Riding.—E.C. have approved, subject to M.E. approval, scheme for the completion of the rural science unit at Howden's new

secondary school, to include greenhouse, boilerhouse, tractor and other stores, boys' and girls' cloakrooms and lavatories. Estimated cost £4,860.

East Sussex.—C.C. recommended to apply for sanction to borrow £10,940 and £6,324 respectively for alterations to magistrates court and improvements at Police Station, Hailsham.

Edzell, Angus.—Approval has been given for construction projects at United States Naval Air Station. Estimated cost more than £1½m.

Ennerdale, Cumb.—R.D.C. Works Committee have approved in principle C.C.'s plan for redeveloping the Lamb Lane-Church Street area of Egremont, which provides for a car park, housing development, and possibly a bus station.

Erith, Kent.—Co. E.C. recommended to approve the provision of an extension to the woodwork shop at the Technical College. Estimated cost £2,250.

Farnworth, Lancs.—B.C. recommended to invite Murrayfield Real Estate Co., Ltd., to submit a scheme for redevelopment of the town centre.

Faversham, Kent.—Co. E.C. recommended to approve scheme for stage II of the new buildings at The Lady Capel Secondary School. Estimated cost £76,000.

Ferryhill, Dur.—Contract expected to be let soon for converting the Gaiety Cinema into a dance hall. Kitching and Co., architects, 21 Albert Road, Middlesbrough.

Folkestone, Kent.—B.C. have approved the modernisation of Old Council houses. Estimated cost £46,980.

Gateshead, Dur.—B.C. to erect five shops and flats on the Lobley Hill housing estate and sketch plans have been prepared by the Borough Engineer.

Golborne, Lancs.—U.D.C. propose conversion of main building on the former Scotia North Naval camp at Lowton into a luxury ballroom. Estimated cost £22,000.

Gravesend, Kent.—Co. E.C. recommended to approve the provision of additional accommodation (second stage) at Northfleet Secondary School for Boys, estimated cost £7,000; accommodation for cabinet making and an additional studio at The Gravesend School of Art, £3,250; geography room and cloakroom at Grammar School for Girls, £1,850.

Halifax, Yorks.—E.C. to apply to M.E. for permission to extend the Mixenden Committee and Youth Centre at a cost of £12,488 and to provide accommodation for a youth club at Ovenden County Secondary School, for £16,091.

Harrogate, Yorks.—Leeds Regional Hospital Board have approved provision of twin operating theatres at Harrogate and District General Hospital. Estimated cost £50,000.

Harrow, Middx.—C.C. propose the provision of accommodation for the school meals service at St. Anselm's R.C. Primary School. Estimated cost £2,800.

Hastings, Sussex.—B.C. recommended to request Selleck Nicholls and Co., Ltd., St. Austell, Cornwall, to submit detailed plans and estimate for redevelopment of 83-86 High Street, and to invite tenders for demolition of the existing buildings.

Borough Engineer will prepare schemes for erection of additional 30 bathing chalets on Lower Promenade and for a new café adjacent to ton of West Hill lift.

B.C. have received planning applications for schemes, as follow: Erection of a 22-storey block of 145 flats, with bar, café, restaurant and petrol filling station, at Grand Hotel site, Regency Mansions, for Thornburn, Muirhead and Partners, Ltd. (architect, T. Sibthorp, 10 Manchester Square, London, W.1.); 30 houses, with garages, at The Heath, 101 Fairlight Road, for Paulivia (architects, Ronald Salmon and Partners, 2a Vicarage Gardens, London, W.8); 16 houses and bungalows, with garages, at Ironlatch Close and Ironlatch Avenue, for Oakwood Builders, Ltd. (architects, Douglas White and Furniss, 12 The Approach, London Bridge, London, S.E.1); 18 houses, two houses, 12 flats and nine garages at east side of Harley Shute Road, for F. W. Booth (Contractors), Ltd. (architect, E. M. Watts, 58 London Road, Redhill, Surrey); a block of 10 flats, with garage in basement, at Star Inn site, Undercliff, for The Francis Group of Companies (architects, Ronald Salmon and Partners, London, W.8); eight-storey block of flats

at 31-33 Warrior Square, for E. Thornton-Smith (architects, Russell Diplock Associates, 235 Vauxhall Bridge Road, London, S.W.1.).

Heckmondwike, Yorks.—U.D.C. have approved plans submitted by F. W. Woolworth and Co., Ltd., for erection of a retail store at junction of Market Street and Blanket Hall Street.

Hull.—E.C. have approved the erection of a new school for physically handicapped children to be called the Frederick Holmes Special School. Estimated cost £79,100.

Hythe, Kent.—Co. E.C. recommended to approve scheme for adaptation of new premises at County Youth Club to provide facilities for recreation and social and physical training. Estimated cost £1,550.

B.C. have granted planning approval to outline applications for the erection of a coach garage at Wood Road, for Newman and Sons (Hythe), Ltd., Albert Road, and workshop, offices and showroom at Stade Street, for Hythe Cabinet and Joinery Works, Ltd., 3-5 Portland Road.

Kent.—Co. E.C. recommended to approve the provision of a small pavilion to be used in connection with the new playing fields at The Medway College of Technology. Estimated cost £5,000.

Kiveton Park, Yorks.—Coal Industry Social Welfare Organisation to provide Kiveton Park Football Club with two football pitches, dressing rooms with baths and showers, officials accommodation and motor mower, etc. Estimated cost £7,250.

Lancaster.—Manchester Regional Hospital Board preparing plans for erection of a night nurses' home and accommodation for junior medical staff at Royal Infirmary.

Leatherhead, Surrey.—Co. Town and Planning Committee have granted planning permission for a sports pavilion at Chrystie recreation ground, Dorking Road, Great Bookham, for U.D.C.

Leek, Staffs.—U.D.C. preparing scheme for 42 garages at Haregate Hall.

Linton, Kent.—Co. E.C. recommended to approve the provision of a rural science unit at Cornwallis Secondary School. Estimated cost £4,050.

Londonderry.—Ministry of Education have approved the site for an extension of Londonderry Municipal Technical College on part of the Strand Road mental hospital site. Estimated cost £350,000.

Luton, Beds.—Tenders are due in on September 20, and contract is expected to be placed by November for the first phase (which includes a five-storey ward block and a two-storey out-patients' and casualty centre) of the expansion and improvement of the Luton and Dunstable Hospital, for the North West Metropolitan Regional Hospital Board. The board's architect is F. A. C. Maunder and engineer, J. Galloway; consulting engineers, Ross, Barker and Wallace, 67 West Nile Street, Glasgow, C.1.; quantity surveyors, Young and Brown, Roman House, London Wall, London, E.C.2.; consulting structural engineers, C. J. Pell and Partners, 4 Manchester Square, London, W.1. Total estimated cost £700,000.

Maidstone, Kent.—Co. E.C. recommended to approve the completion of dining accommodation and the formation of three division rooms at the Grammar School for Girls, estimated cost £9,150; adaptation of farm buildings at Oakwood Park to provide classroom, machinery store, workshop and store for the Maidstone Technical College, £2,000; provision of three removable timber buildings to provide office accommodation at Springfield, £7,500.

Borough Surveyor to submit detailed plans for erection of new central library to the B.C. for approval.

Town Planning permission granted for erection of a four-storey building to form retail shops, showrooms and offices at 24-30 for A. J. Townsend and Co., Ltd., Maidstone Road, Bridgewood, Chatham, and for two shops with two flats over at the corner of Park Avenue for New Thornhill Estates, Ltd., Foley House, Sittingbourne Road, Maidstone.

Melton Mowbray, Leics.—Ministry have approved, subject to conditions, the erection of a petrol and oil service station at Thorpe Road, for the Melton Garage Engineering Co., Ltd., Burton Road.

Middlesbrough, Yorks.—B.C. to erect aged persons' hostel at Beechwood to plans by J. A. Kenyon, borough engineer.

Midhurst, West Sussex.—R.D.C. have approved the external painting of 110 houses at Fernhurst, Midhurst, Trotton, Rogate, Cocking and Lodsworth, estimated cost £1,744; outline planning permission received for the erection of 49 garages between June Meadows and Nine Acres estates.

Morecambe, Lancs.—Manchester Regional Hospital Board are preparing sketch plans for erection of a new out-patient and casualty department at Queen Victoria Hospital.

Motherwell and Wishaw, Lanarks.—Department of Health have approved B.C.'s

scheme to provide two swimming pools in Auchenstewart Grounds, Kirk Road. Estimated cost £100,000.

Newcastle upon Tyne.—Quantities are in hand and tenders are expected to be obtained early next month, for the erection of four-storey showrooms and offices in Blenheim Street, for Roland Burgess, Ltd. Plans are by H. Wiles, the company's architect.

Newcastle upon Tyne.—Subject to M.E. approval, R.C. authorities are hoping to commence soon on a new secondary modern school at Westbourne Avenue, Walker.

Alterations are proposed at 132-4 Buckingham Street to form snack bar for S. Holm, 100 Elswick Road; L. J. Couves and Partners, Grainger Chambers, Hood Street, are the architects for alterations to form office and caretaker's flats at 4-6 Osborne Road, for Chapman and Willan.

North Riding.—M.E. have approved a further stage of the C.C.'s school-building programme. This provides for new school on the Lakes estate, Redcar, and final stage of the Sir W. Turner's School, Redcar, Nunthorpe Primary School, Thornaby R.C. Modern School, Catterick Camp Junior and Infant schools, and the final stage of the Whitby West County Modern School. The Council generally appoints private architects for its schools. Estimated cost £403,000.

Penge, Kent.—Co. E.C. recommended to approve the provision of a removable hut to provide two additional class spaces at James Dixon County Primary School. Estimated cost £2,750.

Penistone, Yorks.—U.D.C. to support Joint Burial Board's proposals to provide a crematorium. Estimated cost £25,000.

Peterborough.—Co. Planning Committee have granted planning approval for a four-storey bedroom wing attached to the Bull Hotel for Paten and Co. (Peterborough), Ltd., 19 Long Causeway; subject to conditions, a store and factory at Fengate for Delecta Table Waters, Ltd., Fleur De Lys House, Norwich; warehousing and light engineering blocks as part of a proposed industrial estate at First Drive, Fengate, for Atcost (Factories), Ltd., The Pantiles, Tunbridge Wells, Kent.

Portsmouth.—City Council have approved planning application by G. Gale and Co., Ltd., The Brewery, Horndean, for the erection of licensed premises with living accommodation above and a shop at Ludlow Road junction with Blakemore Crescent.

Raheny, Eire.—Bank of Ireland, College Green, Dublin, propose replacing temporary premises at the junction of Howth Road and St. Assam's Road with a drive-in branch.

Rainford, Lancs.—U.D.C. have approved plan for three shops, 16 houses and an electricity substation on the Ormskirk Road estate.

Ramsgate, Kent.—Co. E.C. recommended to approve the provision of changing accommodation with showers and improvements to hot water supply at Hereson Secondary School for Boys. Estimated cost £7,250.

Rawmarsh, Yorks.—Club Committee have approved scheme for extensions to the Progressive Club's premises at Willowgarth. Work to commence early 1961. Estimated cost £15,000.

Reading, Berks.—B.C. recommended to approve scheme for the provision of a Civil Defence depot at Abattoirs Road. Estimated cost £20,740.

Reading, Berks.—District Hospital Management Committee have approved the modernisation to Adelaide Ward at the Royal Berkshire Hospital. Work to commence in March next year. Estimated cost £25,000.

Rochester, Kent.—Co. E.C. recommended to approve the provision of hall and ancillary accommodation at Strood County Youth Club, estimated cost £7,000; hatted classroom and division room and revision of entrance and covered way at Rochester Grammar School for Girls, £2,400.

Rochford, Essex.—C.C. propose the erection of a new county secondary school. Estimated cost £228,000.

St. Helens, Lancs.—Crosby Spring Interiors, Ltd., Fleet Lane, propose extensions at their Parr factory. Estimated cost several thousand pounds.

Methodist Church and Sunday School is to be erected in New Street. Estimated cost £12,800.

St. Pancras.—L.C.C. town planning approval is being sought for a petrol station with six-storey offices and four-storey flats above at 141-159 Euston Road for Laing Development Co., Ltd.

Sevenoaks, Kent.—Co. E.C. recommended to approve the provision of three classrooms and ancillary accommodation with hall/dining room at Plaxtol County Primary School, estimated cost £21,000; scheme for improvements to sanitary accommodation at Weald County Primary School, £1,000.

Sheffield.—City Town Planning Committee have approved in principle British Railways'

scheme for erection of a 15-storey office block near Midland Station. Husband and Co., 388 Glossop Road, Sheffield, 10, are the architects and civil engineers.

Shotley Bridge, Dur.—Additions are proposed to Shotley Bridge Victory Club. J. M. Angus, architect, 3 Gallowgate, Newcastle upon Tyne. Scheme in very early stages.

Sittingbourne, Kent.—Co. E.C. recommended to approve the provision of changing rooms, showers and lavatory accommodation at Borden Grammar School. Estimated cost £5,650.

Southport, Lancs.—B.C. recommended to prepare plans for adaptations and alterations at West Hill Old People's Home, Lord Street.

South Shields, Dur.—Quantities will shortly be prepared in readiness for obtaining tenders for the erection of offices and workshops in Newcastle Road for the North-Eastern Electricity Board. It is likely to be two or three months before contracts are arranged. L. J. Couves and Partners, architects, Grainger Chambers, Hood Street, Newcastle upon Tyne.

Standish-with-Langtree, Lancs.—U.D.C. to apply for sanction to borrow £1,566 for provision of eight bus shelters in the district.

Stanley, Dur.—P. L. Browne, Son and Harding, architects, Pearl Buildings, Northumberland Street, Newcastle upon Tyne, have prepared sketch plans for extending council offices for U.D.C.

Regent Petroleum Co., Ltd., propose a filling station at West Road, Annfield Plain.

Stockton-on-Tees, Dur.—Unilever, Ltd., acting on behalf of S.P.D., Ltd., are to develop a site of 5,500 sq. yd. of land at Acklam Street, as a first instalment, it is proposed to build a large cold store; Lonsdale Club are seeking a site for the erection of new premises, and land in Maritime Road and Bath Lane has been suggested.

E.C. to spend £4,000 on the construction of a kitchen/dining room at Portrack Primary School.

Stone, Kent.—Co. E.C. recommended to approve the provision of three movable classrooms for the Brent County Primary School. Estimated cost £4,250.

Strabane, Tyrone.—R.D.C. to erect new Council offices. Estimated cost £23,000.

Strood, Kent.—R.D.C. have approved the erection of six garages at Higham.

Sunderland, Dur.—Quantities are being prepared for additions to the Roker Victory Club. J. M. Angus, architect, 3 Gallowgate, Newcastle upon Tyne. Estimated cost £20,000.

Tenterden, Kent.—Co. E.C. recommended to approve the provision of a hall and additional classroom and sanitation at St. Michael's C.E. Primary School, estimated cost £19,000; buildings for development of stock-keeping at Homewood Secondary School, £1,000.

Thorne, Yorks.—R.D.C. have approved plan for erection of a single-storey office block at rear of Council building. Estimated cost £5,000.

Tonbridge, Kent.—Co. E.C. recommended to approve the provision of a new kitchen at Slade Green County Primary School. Estimated cost £1,910.

R.D.C. to submit to Ministry for approval, scheme for erling and waterproofing the walls of outbuildings of council houses at Gibbert Lane, Hormonden; Oakfield Road, Matfield; Bulls Place, Pembury; and Furnace Lane, Lamberhurst. Estimated cost £4,841.

R.D.C. to prepare documents and invite tenders in due course for an extension to Pembury Road council offices. Estimated cost £12,000.

Tottenham, Middx.—B.C. recommended to prepare plans for the erection of garages adjoining 74 Wilbury Way.

Tynemouth, Northumb.—A contract is expected to be let at an early date for the erection of licensed premises at Queen Alexandra Road for Vaux and Associated Breweries, Ltd., The Brewery, Sunderland. The architects are Page, Son and Hill, 75 King Street, South Shields.

Wallsend, Northumb.—It is proposed to proceed with a scheme for alterations and additions to St. Aidan's R.C. Primary School, Willington Quay, and tenders are being obtained. The architect is D. Brown, 10 Lambton Road, Jesmond, Newcastle upon Tyne.

Warrington, Lancs.—Liverpool Regional Hospital Board have approved scheme for extensions and improvements at General Hospital.

Washington, Dur.—W. W. Gray, manager of the Victoria Hotel, Fatfield, has submitted outline proposals to the planning authorities for a hotel at Junction Road.

West Hartlepool, Dur.—B.C. is reserving a site of over two acres at Burn Road, for the erection of a central maintenance depot.

Westminster.—L.C.C. town planning approval is being sought for reconstruction of existing premises at 84-98 Petty France and

1-9 Palmer Street to provide offices, flats and shops, including a 14-storey office block, for which the architect is D. E. Harrington, 61 Frognaal, London, N.W.3.

West Sussex.—C.C. recommended to approve, subject to M.E. approval, the erection of a three-form entry infants' school on the Westloats Lane campus, Bognor Regis. Work scheduled to commence in March next year. Estimated cost £68,655.

Whickham, Dur.—Taylor Pallister, Ltd., Colliery Road, Dunston, are to carry out renovations to their factory buildings. The work will be done by contract, but no contracts have been arranged.

Whitehaven, Cumb.—J. and W. Robson, 57 Solway Road, Kells, Whitehaven, have applied for planning permission to erect a hotel on site between Coach Road and Low Corkickle.

Wortley, Yorks.—R.D.C. recommended to prepare plans for new staff dining and recreational facilities.

Wycombe, Bucks.—R.D.C. have approved subject to conditions extensions to the Spade Oak Hotel, Bourne End, for Mrs. E. Bird.

Yeovil, Som.—C.C. are preparing bills of quantities for extensions, including the provision of a six-storey block at the Technical College, Ilchester Road. Estimated cost £350,000.

ELECTRICAL

Douglas, I. of M.—B.C. to apply for sanction to borrow £76,500 for an extension to Pulrose power station.

Erith, Kent.—Co. E.C. recommended to approve scheme for the renewal of electrical wiring at Picardy Secondary School for Girls. Estimated cost £1,080.

Kent.—C.C. recommended to approve the provision of lighting protection for the four towers of the Kingsferry Bridge. Estimated cost £1,200.

FENCING

Deal, Kent.—Housing Committee have approved the erection of chain link fencing with timber stakes, etc., for the prefabricated bungalows at St. Richards Road and Marlborough Road. Estimated cost £1,500.

GAS AND WATER SUPPLY

Coleraine, Londonderry.—Ferguson and McIlveen, consulting engineers, 15 College Gardens, Belfast, are submitting plans for R.D.C.'s south-east area water scheme to the Ministry for final approval. Estimated cost £86,000.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Northam, Devon.—U.D.C. have submitted to Ministry for approval, a coast protection scheme for Westward Ho. Estimated cost £500,000.

Ramsgate, Kent.—B.C. recommended to prepare detailed plans for extension of artificial beach at West Cliff by the construction of a third bay. Estimated cost £5,300.

Seaham, Dur.—Further coast protection works are to be carried out by the U.D.C. No contracts have been let. The consulting engineers are Lewis and Duvivier, 122 Victoria Street, London, S.W.1. Estimated cost £13,000.

HEATING AND VENTILATING

Brighton, Sussex.—B.C. recommended to approve the replacement of the heating boiler with oil-fired installation at Balfour Road Primary School. Estimated cost £1,250.

Folkestone, Kent.—Co. E.C. recommended to approve the installation of a comprehensive central heating system at Mundella County Primary School. Estimated cost £3,650.

Newcastle upon Tyne.—Powell Duffryn Technical Services, Ltd., 29 The Side, have been appointed consulting engineers by Newcastle Hospital Board, for new boiler plant and engineering services at Hunters' Moor Hospital, Spital Tongues.

Northallerton, Yorks.—A. R. Poole and Son, 45 Coniscliffe Road, Darlington, are the consulting engineers, for alterations to the engineering services at Friarage Hospital, for the Newcastle Regional Hospital Board.

HOUSING SCHEMES

Aldershot, Hants.—North East Hampshire Area Planning Committee have approved plans for 10 pairs of houses at Heron Wood estate for B.C.

Ayr.—Dean of Guild Court have approved the erection of 32 houses at Teviot Street, Heathfield, for Mactaggart and Mickel, Ltd., 107 West Regent Street, Glasgow. Estimated cost £68,800.

Basingstoke, Hants.—North East Hampshire Area Planning Committee have ap-

proved plan for 72 houses and garages at Western Way for B.C.

Batley, Yorks.—B.C. planning a new housing estate at Howden Clough and first phase will comprise 40 houses and 12 garages.

Bournemouth, Hants.—B.C. recommended to grant planning permission for the erection of an 18-storey hotel on the site of the Royal Exeter Hotel. Greens and Cross, Metropole Chambers, The Lansdowne, are the architects for the scheme.

Bridlington, Yorks.—B.C. recommended to acquire land between Leys Road, Easton Road and Bessingby Hill for housing purposes.

Chatham, Kent.—B.C. recommended to approve in principle draft layout for the phased redevelopment of the site of the present 90 American temporary bungalows at Churchill Avenue, incorporating the adjoining land by the erection of 56 three-bedroom and 28 two-bedroom houses, six one-bedroom units for old people, and 118 garages at the north end of the site.

Darlington, Dur.—Bussey and Armstrong, Brinkburn Road, Darlington, are to erect houses north of Kirkfield Road.

B.C. have prepared layout plans for houses at Yarm Road and Hundens Lane.

Deal, Kent.—Planning permission granted, subject to conditions, for erection of 12 flats at Dover Road/Salisbury Road junction, Walmer, to G. H. Deane. Jackson and Jackson, architects, 149 Sandgate Road, Folkestone.

Doncaster, Yorks.—Town Planning Committee have approved the erection of 34 houses, 19 bungalows and 53 garages at Broomhouse Lane for Drury Estates, Ltd., Scotter Road, Scunthorpe.

Droxford, Hants.—R.D.C. to prepare layout plan for old people's bungalows at Pound Lane site, Meonstoke.

Farnborough, Hants.—Daniel T. Jackson, Ltd., Roebuck Road, Hainault, Essex, are to develop a site at Cove Brook between Fernhill Road and Prospect Road. Scheme comprises between 1,300 and 1,500 dwellings, shopping centre and a site for a school.

Frome, Som.—R.D.C. propose the erection of 30 houses at Rode.

Hastings, Sussex.—B.C. recommended to appoint Caston and Porritt, 17 Havelock Road, Hastings, as the quantity surveyors for redevelopment of Bromsgrove by erection of 62 dwellings.

Hemel Hempstead, Herts.—B.C. have approved in principle, scheme for 219 dwellings and 204 garages at Highfield South, for the Development Corporation.

Leek, Staffs.—U.D.C. have been allocated an additional 39 houses and propose the erection of 35 at Brow Hill site and four at Mill Street; to seek planning approval for the use of site in Newcastle Road for housing purposes.

Lexden and Winstree, Essex.—R.D.C. to erect 42 houses at East Donyland, 36 at West Bergholt and six at Little Horkeley.

Machynlleth, Monts.—R.D.C. to obtain tenders for the erection of eight houses at Derwenlas.

Maidstone, Kent.—Town Planning permission granted for erection of four detached bungalows and garages and six detached houses with garages on site of former playing field on east side for Sterling Homes, Ltd., Park Drive, Sittingbourne, and for six blocks of two-storey flats in Dickens Road and four blocks of two-storey flats in Egerton Road for B.C.

Montrose, Angus.—Dean of Guild Court have approved plans for 40 houses in the redevelopment of Orange Lane, Market Lane and Queen Street area for B.C. Estimated cost £70,000.

Pembroke.—B.C. have approved outline application for the development of land at Upper Lamphey Road, for W. G. Brown, 5 Merlin's Cross.

Reading, Berks.—B.C. recommended to proceed with scheme for the erection of 30 flats and 24 garages at Coronation Square, Southcote estate during this year.

St. Marylebone.—L.C.C. town planning approval is being sought for a 10-storey block of flats with penthouse and 28 garages at 36-38 Finchley Road, for which the architect is Julian Keable, 59-60 Haymarket, London, S.W.1.

Stanley, Dur.—Simpson Lawson and Partners, Blackett Street, Newcastle upon Tyne, are to develop a private housing site at Tanfield Village.

Stockton-on-Tees, Dur.—C. M. Yuill, Ltd., Villiers Street, West Hartlepool, are planning the erection of houses at Valley Drive and Coniscliffe Road, Elwick (C. L. Heslop, architect, Upper Church Street, West Hartlepool); C. L. Heslop has also prepared layout plans for houses on about 2½ acres of land at Dalton Piercy, for Richardson Estates.

Willesden, Middx.—B.C. recommended to submit for planning approval scheme for the provision of five self-contained units of accommodation for old people in each of 15, 17 and 19 Park Avenue. Estimated cost £18,000.

PLAYING FIELDS, PARKS, ETC.

Brighton, Sussex.—B.C. recommended to proceed with scheme for the layout of playing fields at Waterhall. Estimated cost £2,000.

Farnworth, Lancs.—B.C. recommended to invite tenders from specialist firms for development of Harper Green playing fields.

Hemel Hempstead, Herts.—B.C. have approved scheme for a children's playground at Durrants Hill.

ROADS, BRIDGES AND SITE WORKS

Basingstoke, Hants.—Co. Planning Committee recommended to approve layout of the roads for the southern section of the Houndmills industrial estate off Kingsclere Road, for B.C.

Beckenham, Kent.—Co. E.C. recommended to approve scheme for tarpaving and the provision of a groundsman's store at the Grammar School for Girls. Estimated cost £2,445.

Bexley, Kent.—Co. E.C. recommended to approve scheme for additional tarpaving at Hurst County Primary School. Estimated cost £1,085.

Birmingham.—Airport Committee have approved in principle a two-year programme of improvements at Elmdon. Scheme includes the provision of extra aprons, a taxiway to speed the handling of air traffic, car park extensions and additions to restaurant facilities. Estimated cost £500,000.

Brighton, Sussex.—B.C. recommended to proceed with the site works for the proposed College of Technology. Estimated cost £20,000.

Broadstairs and St. Peters, Kent.—C.C. recommended to approve, subject to grant aid, scheme for the improvement of bend between Little Holland House and Kingsgate Castle. Estimated cost £3,120.

Chatham, Kent.—B.C. recommended to approve plans for the provision of a car park on part of the site of building No. 1 Riverside and extension of existing car park on site of St. Mary's School. Estimated cost £2,500 and £1,350 respectively.

Deal, Kent.—C.C. recommended to approve, subject to grant aid, scheme for the improvement of sight line at junction of Dover Road A.258 with Canada Road. Estimated cost £4,483.

Dunmow, Essex.—R.D.C. propose the construction of a car park at White Street.

Erith, Kent.—B.C. have approved the making-up of Holly Hill Road. Estimated cost £6,663.

Folkestone, Kent.—Co. E.C. recommended to approve scheme for tarpaving at Lyminge C.E. Primary School. Estimated cost £1,000.

Harrogate, Yorks.—Borough Engineer preparing scheme for single level car parks in the Royal Hall Gardens.

Harrow, Middx.—B.C. to proceed with scheme for making-up part of Thornton Grove, Hatch End.

Borough Engineer to prepare scheme for making-up the roadway off Marsh Road towards Cambridge Road.

High Wycombe, Bucks.—B.C. recommended to apply for sanction to borrow £1,040 and £8,470, respectively for making-up of Fennel Road and Herbert Road (sections 1, 2 and 3).

Londonderry.—City Council propose to resurface the carriageway of Derry's Walls. Estimated cost £14,000.

Margate, Kent.—B.C. recommended to approve plans for the making-up of Leicester Avenue (part) and Carlton Rise, Westgate-on-Sea.

Norfolk.—M.O.T. have approved Highways Committee's scheme for the purchase of sections of the Midland and Great Northern Railway for conversion into roads.

Reading, Berks.—B.C. recommended to approve plans for the making-up of Ilkley Road; approve in principle scheme for widening of Church End Lane.

Sunderland, Dur.—Borough Engineer to prepare scheme for a new approach road to Roker and an extension to the lower promenade. Estimated cost £32,000.

Tonbridge, Kent.—C.C. recommended to approve, subject to grant aid, scheme for provision of footpath and footbridge adjacent to Frog Bridge, Shipbourne Road. Estimated cost £4,212.

Tunbridge Wells, Kent.—B.C. recommended to apply for sanction to borrow £10,526 for the replacement by 21in. diameter sewers of existing surface and foul water sewers in the Culverden Park area.

West Riding.—M.O.T. have agreed in principle to the detailed preparation and supervision of the Sheffield-Leeds extension to the London to Yorkshire Motorway by C.C.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bingham, Notts.—R.D.C. to proceed with the Cotgrave sewage disposal scheme.

Chester-le-Street, Dur.—U.D.C. to construct additional sewers at Blind Lane. No contracts let. The consulting engineers are D. Balfour and Sons, 145 Pilgrim Street, Newcastle upon Tyne. Estimated cost £22,000.

Chorley, Lancs.—R.D.C. have appointed C. J. Lomax and Son, 37 Cross Street, Manchester, 2, as consulting engineers to prepare a preliminary report on a sewerage scheme for Bretherton.

Clun, Salop.—R.D.C. to apply for sanction to borrow £63,525 for the construction of the Clun sewerage scheme.

Coventry.—General Works Committee to prepare scheme for improving storm water and sewage disposal in Binley Road between Church Lane and Brinklow Road.

Douglas, I. of M.—B.C. to submit to Local Government Board for approval, scheme for the construction of a sewer in the Kewaigue drainage district. Estimated cost £2,900.

Dover, Kent.—R.D.C. considering main drainage scheme for the villages of Sibberts-wold, Coldred, Lydden, St. Margaret's, Ring-would and Kingsdown.

Howden, Yorks.—R.D.C. to prepare detailed sewerage schemes for Foggathorpe (£11,718), Giberdyke and Newport (£132,500), Eaststrington (£30,000) and Laxton (£14,000).

Lancaster, Dur.—R.D.C. propose extensions to Castleside sewage disposal works, scheme is still in early stages, but it is expected that the work will be done by direct labour. Plans by J. A. Routledge, surveyor. Estimated cost £7,000.

Llanelli, Carmar.—R.D.C. have submitted to Ministry for approval, the Cwmtawel-Cwmgwill sewerage scheme in the parish of Llannon.

Long Ashton, Som.—R.D.C. have approved in principle, scheme for laying a trunk sewer from Nailsea to the Clevedon boundary. Estimated cost £254,000.

Swaffham, Norfolk.—R.D.C. to submit to Ministry for approval, scheme for extending the sewers in the parish of Saham Toney. Estimated cost £27,870.

Thorne, Yorks.—R.D.C. to submit to Ministry for approval scheme for a sewage disposal works at Turf Moor Road, Hatfield Woodhouse.

Torrington, Devon.—B.C. to submit to Ministry for approval, plans for extension to the sewage disposal works. Estimated cost £34,000.

STREET LIGHTING

Battle, Sussex.—Parish Council to apply for sanction to borrow £1,650 for public lighting extension.

Edmonton, Middx.—B.C. recommended to approve stage V of scheme for conversion from gas to electricity of public lighting. Estimated cost £31,000.

Longton, Lancs.—Ministry have approved Parish Council's street lighting scheme. Specifications are being prepared and tenders are to be invited shortly. Estimated cost £20,000.

CONTRACTS

Full details of the Contracts marked * will be found in our Advertisement Columns.

BUILDING AND DECORATING

(See also Housing Schemes)

Armagh.—Erection of R.U.C. county headquarters at Armagh for Ministry of Finance, to be completed within 18 months from the date of acceptance of a tender. The building will be of two- and three-storey construction with single-storey garages and two married quarters with an approximate area exclusive of garages and married quarters of 20,000 sq. ft. Documents from Room 103, Law Courts Building, Belfast, 1. Deposit £5. Plans also seen at R.U.C. Station, Russell Street, Armagh. Tenders by Sept. 26.

Belfast.—Completion of partly erected sports pavilion at Woodvale Park for City Council. Documents from City Architect's Office (Room 53), City Hall, Belfast, 1. Tenders by Sept. 14.

Blaenavon, Mon.—Following for U.D.C.: Taking out, removal and disposal of existing metal casement windows in Elgam Avenue, 143 houses, and the provision and fixing of standard metal casement windows including the necessary glazing. Documents from the Surveyor's Department, Council Offices,

Blaenavon. Deposit £1 ls. Tenders by Sept. 19.

Bournemouth, Hants.—Supply and erection of a purpose-made timber hut, size 24ft. by 18ft., at Oakmead Boys' School, Duck Lane, for B.C. Documents from Borough Architect (Room 106), Town Hall, Bournemouth. Deposit £1 ls. Tenders by Sept. 12.

Breconshire.—Reslating works at Clydach County Primary School for C.C. Applications to T. Jestyn Williams, county architect, Rhed Offices, Brecon, by Sept. 9.

Brentwood, Essex.—Supply and erection of 67 garages for U.D.C. Deposit £1 ls. Tenders by Sept. 14.

Caernarvonshire.—Internal and external painting at Glynllifon Agricultural Institute, near Caernarvon, for Co. E.C. Documents from County Architect, County Offices, Caernarvon. Tenders by Sept. 10.

Castlereagh, Down.—Following for R.D.C.: (1) Internal plumbing; (2) electrical installation and (3) supply of ironmongery—door locks, door furniture, etc., at (a) 177 houses, 24 flats and two shops at Carrowreagh, Dundonald; (b) 50 houses at Gilmahirk Road, Gilmahirk; (c) 21 flats at Grand Prix Park, Dundonald. Documents from the Council Offices, 368 Cregagh Road, Belfast, 6. Deposit £3 each. Tenders by Sept. 9.

Clutton, Som.—Site works and the erection of four garages at Hill View, Farrington Gurney, for R.D.C. Documents from the Housing Manager, Council Offices, Temple Cloud, Bristol. Tenders by Sept. 21.

Dudley, Worcs.—Erection of 65 garages on one site, and 16 garages on another site at Saltwells estate, together with tarmacadam paved forecourts, drainage, etc. The construction is of brick with timber and asbestos roofs, for B.C. Applications to the Borough Architect, 5 Ednam Road, Dudley, by Sept. 12. Deposit £2 2s., cheques payable to B.C.

East Barnet, Herts.—External repair and redecoration of buildings at Church Farm, contract 936, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Station Road, New Barnet. Deposit £1 ls. Tenders by Sept. 19.

Edinburgh.—Parsons Green Primary School, painter work, for City Council. Applications to the City Architect, City Chambers, Edinburgh, by Sept. 16. Tenders by Oct. 10.

Eire.—Erection of new agricultural schools at (1) Athenry, Co. Galway, (2) Clonakilty, Co. Cork, for Office of Public Works. Documents from the Secretary, Office of Public Works, 51 St. Stephen's Green, Dublin. Deposit £10 each. Plans also seen at Galway and Cork District Offices of Public Works. Tenders by Oct. 4.

Essex.—Following for C.C.: (1) Basildon, Timberlog Secondary School, further education wing, £7,450; (2) Dunton County Primary School, rebuilding toilets and waterborne sanitation, £5,600. Separate applications to H. Conolly, county architect, County Hall, Chelmsford, by Sept. 3.

Essex.—Erection of Harlow Burnt Mill County Secondary School for C.C. The building will be part four, two- and single-storey in steel-framed construction with brick and concrete facing, estimated cost £340,000. Applications to H. Conolly, county architect, County Hall, Chelmsford, by Sept. 3.

Glasgow.—Following for City Council: Replacement of broken glass and other glazing requirements on properties maintained by the above department, for a period of 12 months ending Sept. 30, 1961. Documents from the Manager, Housing and Works Department, 266 George Street, Glasgow, C.1. Tenders by Sept. 9.

Haverfordwest, Pems.—Following for B.C.: (a) External repair works and vertical wall shingling to houses 98, 100, 102 and 104 City Road; (b) road widening and improvements, Hawthorn Rise. Documents from the Borough Surveyor, Picton House, Haverfordwest. Tenders by Sept. 19.

Haverfordwest, Pems.—Erection and completion of public convenience and bus shelter at Johnston for R.D.C. Documents from the Engineer and Surveyor, 8-10 Picton Place, Haverfordwest. Tenders by Sept. 16.

Howden, Yorks.—Following for R.D.C.: Installation of hot water systems, w.c.s and drainage work at houses as follows—(contract 1) Eaststrington, six houses; (2) Barmby, two; Wressle, two; (3) Sparrowcroft Lane, Blacktoft, two; Stoddlethorpe Lane, Blacktoft, two; Yokefleet, two; (4) Ellerton, two; Aughton, four; (5) Holme-on-Spalding Moor, 10; (6) Howdensdyke, seven. Erection of garages in Scutcliff Lane, Howden—(7) construction of forecourt, base and improvement of vehicular access; (8) supply and erection of block of 12 prefabricated garages. Conversion of building into flats—(9) conversion of 21 and 23 St. John Street, Howden, into four flats. Documents from the Surveyor, 41 Haligate, Howden. Tenders by Oct. 5.

Isle of Ely.—South District Junior School, Burrowmoor Road, March, erection of new lavatory accommodation and ancillary work, for C.C. This work will consist mainly of an extension at each end of the school building in single-storey brick construction with timber roof and will have a floor area of approximately 1,140 sq. ft. Applications to the County Architect, County Hall, March, Cambs., by Sept. 5. Tenders by Sept. 28.

Kingston-upon-Thames, Surrey.—Erection of concrete panel fence, footpath, covered way and drainage works at Kingston Grammar School for B.C. Documents from the Borough Surveyor, Guildhall, Kingston-upon-Thames. Deposit £2 2s. Tenders by Sept. 12.

Lancashire.—Approved list of contractors for C.C. The lists are as follows: (1) Contracts estimated to cost over £15,000 and up to £50,000; (2) contracts estimated to cost over £50,000 and up to £100,000; (3) contracts estimated to cost over £100,000. Contractors may apply for their name to be included in any one or more of the lists. Applications must be made on forms obtainable from the County Architect, P.O. Box 26, County Hall, Preston, to be returned by Sept. 12.

Lancashire.—Extensions to the Standish police station for C.C. Work includes erection of single-storey, felted-room building in traditional construction and alterations to existing buildings, drainage, services and finishes. Applications to the County Architect, P.O. Box 26, County Hall, Preston, by Sept. 5.

Leeds.—Alterations to form improved lavatory accommodation, wash-up and servery (traditional construction—all trades) at 109/111 Portland Crescent, for City Council. Documents from Director of Works, Sweet Street, Leeds, 11. Deposit £2, cheques payable to the Corporation. Tenders by Sept. 23.

Lindsey.—Extensions to Louth King Edward VI Grammar School, comprising erection of two new single-storey extension blocks, having total floor area of approximately 3,280 sq. ft., together with sundry internal alterations and site works for C.C. Documents from A. Ronald Clark, county architect, County Offices, Lincoln. Tenders by Oct. 5.

Liverpool.—Construction of a gymnasium block, Prince Rupert Secondary Modern School, Margaret Street, for City Council. Documents from the City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2. Deposit £2 2s., payable to City Treasurer. Tenders by Sept. 9.

Liverpool.—Conversions, etc., at 51 Catharine Street for City Council. Documents from the City Engineer and Surveyor, Municipal Buildings, Liverpool. Tenders by Sept. 20.

Luton, Beds.—Stripping, felting and battening and re-tiling with new tiles and sundry works to chimney stacks to 24 houses in Dellcot Close, Stopleys, for B.C. Documents from the Director of Housing, Town Hall, Luton. Deposit £2 2s. Tenders by Sept. 6.

Magor and St. Mellons, Mon.—Renewal of grates and backboilers as follows for R.D.C.: (Contract 1) Eurwg Crescent, St. Mellons; Pentwyn Terrace, Marshfield, total 12 grates; (2) Laurel Drive, Bassaleg; Laurel Road, Bassaleg; St. Basil's Crescent, Bassaleg, total 18 grates; (3) Ebenezer Drive, Rogerstone, total 36 grates; (4) Sycamore Terrace, Magor, total seven grates. Documents from the Engineer and Surveyor, Council Offices, Banerwell, Newport, Mon. Deposit £1 ls. Tenders by Sept. 9.

Middleton, Lancs.—Internal painting of the main and small plunges of the public baths, for B.C. Documents from the Borough Architect, Town Hall, Middleton. Tenders by Sept. 19.

Midlothian.—Supply and erection of approximately 75 omnibus passenger queue shelters to be erected at various bus stopping places throughout the county, for C.C. Applications to the County Clerk, County Buildings, George IV Bridge, Edinburgh, by Sept. 5.

Mid-Wales.—External redecoration of the following properties for Police Authority: Police station, Llanfyllin; sub-divisional headquarters and two houses, Sevrn Street, Welshpool; police houses, Gungrog Road, Welshpool. Documents from P. E. White, clerk of the Authority, County Offices, Welshpool. Tenders by Sept. 12.

Neston, Ches.—External painting of the following for U.D.C.: (1) Sixty-one dwellings, east section; (2) 65 dwellings, west section; (3) internal work on five blocks of flats, at the Liverpool Road/Raby Park Road estate, Neston. Documents from the Engineer and Surveyor, Town Hall, Neston, Wirral. Tenders by Sept. 16.

Northampton.—Erection of highways maintenance depots at Pleydell Road and Green-

view Drive, for B.C. Applications to the Borough Architect, Guildhall, Northampton, before Sept. 5. Deposit £2 2s. cheque.

Northern Ireland.—External repainting of 189 dwellings and 10 garages at Ballymena (rectory), for Housing Trust. Documents from the Offices of the Trust, 12 Hope Street, Belfast, 12. Tenders by Sept. 9.

Northern Ireland.—External repainting of the following for Housing Trust: (a) Twenty-nine dwellings at Moneyreagh; (b) 40 dwellings at Millisle. Documents from the Offices of the Trust, 12 Hope Street, Belfast, 12. Tenders by Sept. 6.

Northern Ireland.—Extensive repairs and renovations to Lismoyle Residence at Five-miletown, for General Health Services Board. Documents from the Secretary, 27 Adelaide Street, Belfast, 2. Tenders by Sept. 12.

Nottingham.—Extension and improvement of the Wilford Hill Crematorium, for City Council. Documents from R. M. Finch, city engineer and surveyor, The Guildhall, Nottingham. Deposit £2. Tenders by Sept. 23.

Oldbury, Worcs.—Erection of 37 garages (brick construction) off Bredon Road, Lion Farm estate, for B.C. Applications to the Borough Engineer and Surveyor at Municipal Bank Chambers, Birmingham Street, Oldbury, by Sept. 12. Deposit £2 2s. Tenders by Oct. 10.

Peterborough.—External decorations to Town Hall for City Council. Applications to the City Engineer, Town Hall, by Sept. 3. Deposit £2. Tenders by Sept. 12.

Petersfield, Hants.—Construction of swimming pool for Petersfield Standing Joint Committee of Rotary, Round Table and Chamber of Commerce. Tenders by Sept. 22.

Plymouth.—Improvement to 206 dwellings for City Council. Tenders by Sept. 9.

Royston, Herts.—Construction of bus station, shelter and conveniences for U.D.C. Tenders by Sept. 9.

St. Faith's and Aylsham, Norfolk.—Improvement works to 14 pre-war houses at Buxton for R.D.C. Documents from the Housing Officer, Tudor Hall, Rose Lane, Norwich, Norfolk. Deposit £1 1s. Tenders by Oct. 3.

Salford, Lancs.—Preparation of four garage sites and erection of 48 garages for City Council. Tenders by Sept. 15.

Shipley, Yorks.—Site clearance and the erection of four shops and maisonnettes at Festival Avenue, Owlet Hall estate, for U.D.C. Documents from the Surveyor, Town Hall, Shipley. Deposit £5 5s. Tenders by Sept. 17.

Sligo, Eire.—Erection of a new factory and office block at Ballast Quay, Sligo (total floor area approx. 10,700 sq. ft.) for Liebig Extract of Meat Co., Ltd. Documents from Padraig Mulcahy, chartered quantity surveyor, 4 Northbrook Road, Dublin, and Eglinton House, Eglinton Street, Galway. Deposit £26 5s. Plans also seen at the office of A. G. Jennings, consulting engineer, O'Connell Buildings, O'Connell Street, Sligo. Tenders by Sept. 14.

Smethwick, Staffs.—Erecting 15 multiple-type Marley prefabricated or other approved make of garages on concrete foundations with access road and incidental drainage works at Mill Gardens, Thimblemill Road for B.C. Written application to the Borough Engineer and Surveyor, Council House, Smethwick. Deposit £2 2s. (cheque, payable to Borough Treasurer). Tenders by Sept. 9.

Smethwick, Staffs.—Structural alterations and redecoration to The Lodge, Uplands Cemetery, Church Road, for B.C. Written applications to the Borough Engineer and Surveyor, Council House, Smethwick. Deposit £2 2s. (cheques payable to Borough Treasurer). Tenders by Sept. 19.

Southampton.—Erection of College of Technology (multi-storey teaching block, single-storey workshops, etc.), at East Park Terrace, for B.C. Written applications to Borough Architect, Civic Centre, Southampton, by Sept. 10. Tenders by Nov. 14.

Southend-on-Sea, Essex.—Lavatory extensions, Hinguar Street Schools, Shoeburyness, for B.C., comprising erection of three single-storey toilet blocks abutting existing buildings of a total floor area of about 1,000 super. ft. of brick construction and timber flat roofs, demolition of existing lavatories, and works incidental thereto. Applications to the Borough Architect, 30 Alexandra Street, Southend-on-Sea, by Sept. 7, accompanied by details of similar works previously undertaken and names of architects from whom references may be obtained.

Southport, Lancs.—Following contracts connected with the proposed alterations and extensions at the Floral Hall, for B.C. Main contract, for the alterations and extensions on bills of quantities; sub-contract, for the electrical installation on specification and drawings. Documents from the Borough Architect and Town Planning Officer's Department, 99/105 Lord Street, Southport. Deposit £2 2s. each. Tenders by Oct. 7.

South Shields, Dur.—Erection of a community centre, branch library and clinic at Boldon Lane, for B.C. Documents from the Borough Engineer, Town Hall, South Shields. Deposit £5 5s. Tenders by Oct. 12.

Stockport, Ches.—Painting of steel public lighting columns (236 class A) and cast-iron steel and wrought-iron railings (approximately 3,000 lin. yd.) in various streets for B.C. Documents from Room 76, Town Hall, Stockport. Tenders by Sept. 19.

Stoke-on-Trent, Staffs.—Erection of shops and offices, Stafford Street/Tontine Street, Hanley, for City Council. Written application to the City Architect, Kingsway Chambers, Kingsway, Stoke-on-Trent, by Sept. 6. Deposit £2. Tenders by Oct. 10.

Stoke-on-Trent, Staffs.—Erection of Health Centre, Ubbesley, for City Council. Written applications to the City Architect, Kingsway Chambers, Kingsway, Stoke-on-Trent, by Sept. 6. Deposit £2. Tenders by Oct. 6.

Swansea.—Erection of a sports pavilion and tea room at Bonymaen playing fields for B.C. The scheme is a single-storey traditionally built structure with lightweight constructed felted flat roof with approximate floor area of 2,500 sq. ft. Applications to the Borough Architect, the Guildhall, Swansea, by Sept. 6. Deposit £5.

Upton-upon-Severn, Worcs.—External painting of 20 houses at Bow Hill, Callow End, near Worcester, for R.D.C. Documents from the Surveyor, Council Offices, Upton-upon-Severn, Worcester. Deposit £2 2s. Tenders by Sept. 10.

West Riding.—Part internal painting of the Silsden Aire View School (annexe) for C.C. Sealed tenders in the envelope provided should be returned not later than 12 noon on Wednesday, Sept. 7, 1960. Documents from D. Matthew, divisional education officer, Education Office, Water Street, Skipton. Tenders by Sept. 7.

West Riding.—Alterations to the farmhouse at Yew Tree Farm, Marton-cum-Grafton, near Boroughbridge, for C.C. The work includes pulling down part of the house, together with the adjoining buildings, and carrying out sundry alterations and renewals. Documents from the County Land Agent, County Hall, Wakefield. Tenders by Sept. 19.

West Riding.—Rebuilding of a glazed corridor at Braithwell County Primary School, near Rotherham, for C.C. Documents from the Divisional Education Officer, County Area Offices, Station Road, Doncaster. Tenders by Sept. 14.

West Riding.—Extension of store to form servery at Brook Lodge, Selby, for C.C. Applications to the County Architect, Bishopgarth, Westfield Road, Wakefield, by Sept. 9. Tenders by Sept. 26.

West Riding.—Improvements to washing up facilities at Luddenden C.E. School for C.C. Applications to the Divisional Architect, Flint Street, Huddersfield, by Sept. 5. Tenders by Sept. 19.

West Sussex.—Following for C.C.: (a) Extensions and adaptations to Steyning C.E. Primary School (job 6141); (b) new laboratories, etc., at high school for boys, Chichester (job 6311); (c) extensions and modifications to existing buildings at Rogate C.E. Primary School (job 6129); (d) new primary school on Ifield campus site, Crawley (job 6192). Applications to the County Architect, County Hall, Chichester, by Sept. 12. Quantities will be issued on or about November 24 for (a), October 31 for (b) and (c), and December 15 for (d).

Wirral, Ches.—External painting of the Board's offices and internal decoration of part of these premises, all situated at 69 Allport Road, Bromborough. Wirral, for West Cheshire Water Board. Documents from A. L. Lyon, engineer and manager, 69 Allport Road, Bromborough. Tenders by Sept. 12.

Worcestershire.—Erection of a teachers' training college at Bromsgrove for C.C. Applications to L. C. Lomas, county architect, 14 Castle Street, Worcester, by Sept. 5. Where contractors applying have not previously carried out major works under the County Architect, they are required to submit details of single contracts costing at least £300,000, which they have completed recently, together with the names of the architects responsible.

CLOTHING AND TEXTILES

Blackpool, Lancs.—Supply of overall clothing for B.C. Documents from the Director of Public Cleansing, 3 Caunce Street, Blackpool. Tenders by Sept. 21.

Edinburgh.—Supply of uniform clothing for Corporation Transport. Documents from the Transport Manager, 14 Queen Street, Edinburgh, 2. Tenders by Sept. 30.

Monmouthshire.—Supply of uniform clothing for ambulance drivers, for C.C. Uniform will be required for approx. 90/100 drivers. Documents from Vernon Lawrence, clerk of

the Council, County Hall, Newport, Mon. Tenders by Sept. 17.

Sheffield, Yorks.—Supply of uniform clothing for Transport Department. Samples may be inspected during office hours before Sept. 9. Documents from R. C. Moore, general manager, Division Street, Sheffield, 1. Tenders by Sept. 10.

DEMOLITION

Grantham, Lincs.—Demolition of 16, 17, 18 and 19 Manners Street, and 1, 2, 3 and 4 Cambridge Place, Manners Street, for B.C. Documents from the Chief Public Health Inspector, 16 St. Peter's Hill, Grantham. Tenders by Sept. 5.

Holmfirth, Yorks.—Demolition of buildings formerly Newtown Mill for U.D.C. Documents from, and arrangement for inspection of the buildings made with the Surveyor, Crown Bottom, Holmfirth. Tenders by Sept. 7.

Middlesbrough, Yorks.—Demolition of buildings adjoining the old Town Hall, Market Place, St. Hilda's, for B.C. Documents from the Borough Engineer, Municipal Buildings, Middlesbrough. Tenders by Sept. 19.

Poole, Dorset.—Demolition and site clearance of approximately 80 houses at Old Town for B.C. Documents from Borough Architect, Municipal Buildings, Poole. Deposit £2 2s. Tenders by Sept. 12.

Salcombe, Devon.—Demolition of two semi-detached houses and site clearance at Courtenay Street, for U.D.C. Documents from A. J. C. Nex, surveyor, Council Offices, Salcombe. Deposit £3 3s., cheque payable to U.D.C. Tenders by Sept. 14.

Sheffield, Yorks.—Demolition of premises at Moorhead, for City Council. Deposit £2 2s. Tenders by Sept. 13.

Truro, Corn.—Demolition and clearing of sites at the following for City Council: 1-6 Cooks Row; 1-3 and 11-13 Rosewin Hill, and 10-12 Union Street. Documents from S. John O'Farrell, city engineer and surveyor, Municipal Buildings, Truro. Tenders by Sept. 26.

ELECTRICAL

Birmingham.—Alterations and additions to the electrical installation at Highbury Hall, Queensbridge Road, for City Council. Documents from the office of Sir Herbert J. Manzoni, city engineer and surveyor, Civic Centre, Birmingham, 1. Deposit £2 2s. cheque. Tenders by Sept. 7.

Clutton, Som.—Electrical installation for 46 dwellings at The Mead, Farmborough, for R.D.C. Documents from Thomas and Morgan and Partners, architects, 23 Gelliwastad Road, Pontypridd. Deposit £1 1s. Tenders by Sept. 8.

Sunderland, Dur.—Electrical installation to the extensions and alterations to cleansing depot, Railway Row, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by Sept. 19.

Wem, Salop.—Installation of electricity at six houses situated at Ash Whitchurch for R.D.C. Documents from C. H. Jeffery, surveyor, Council Offices, Wem. Tenders by Sept. 26.

FENCING

Aberdeen.—Supply and erection of galvanised welded mesh fencing at Northfield housing scheme, section 24, for City Council. Applications in writing to the City Architect, 11 Broad Street, Aberdeen. Tenders by Sept. 9.

Barnes, Surrey.—Erection of the following for B.C.: (1) Chain link fencing at Westfields, S.W.13; (2) close boarded fencing at Westfields, S.W.13, comprising the supply and erection of approximately 100yd. of 6ft. chain link fencing and approximately 60yd. of 6ft. close boarded fencing. Separate tenders for either (1) or (2) will be accepted. Documents from W. R. Shepherd, borough engineer and surveyor, Municipal Offices, Sheen Lane, S.W.14. Tenders by Sept. 16.

Belfast.—Following for Belfast Hospital Management Committee at Royal Victoria Hospital: Supplying/erecting fencing at blood transfusion unit—R.V.H. Documents from the Superintendent Engineer, Area Maintenance Department, Royal Victoria Hospital. Tenders by Sept. 13.

Carmarthen.—Mansel Street entrance, provision market, demolishing the existing gate pillars and rebuilding new pillars together with the erection of new double and single gates and works incidental thereto, for B.C. Documents from J. Vivian Evans, borough engineer, John Street, Carmarthen. Deposit £2 2s. Tenders by Sept. 12.

Liverpool.—Supply and erection of wrought-iron railings and gate, Lister Drive allotments, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Sept. 12.

Liverpool.—Supply and erection of concrete post and wood pale fencing, Speke S.M. School, Liverpool, 24, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Sept. 8.

Manchester.—Supply of low hurdle fencing during the period Oct. 1, 1960, to Dec. 31, 1961, for City Council. Documents from the City Surveyor, Town Hall, Manchester, 2. Tenders by Sept. 6.

Southgate.—Provision and erection of approx. 270 lin. yd. of concrete panel fencing at Barrowfield Green refuse disposal plant for B.C. Applications in writing to the Borough Engineer and Surveyor, Town Hall, Palmers Green, N.13. Tenders by Sept. 5.

Southport, Lancs.—Provision and erection of approx. 475 yd. of reinforced concrete posts and chain link fencing, at Liverpool Road recreation ground, for B.C. Documents from Borough Engineer, Town Hall, Southport. Tenders by Sept. 13.

Walsingham, Norfolk.—Supply and erection of approximately 290 yd. of concrete post and wire fencing at Little Snoring and the provision of six concrete garage bases at Fakenham for R.D.C. Documents from the Housing Officer, Council Offices, Baron's Hall, Fakenham. Tenders by Sept. 5.

West Riding.—Cudworth County Secondary School, renewal of sports field fencing, for C.C. Documents from H. Cockell, assistant divisional education officer, 2 St. John's Square, Wakefield. Tenders by Sept. 5.

Willenhall, Staffs.—Provision and erection of 1,208 lin. yd. of 6 ft. high chain link fencing on precast concrete posts, with five sets of 12 ft. wide gates, for U.D.C. Documents from the office of the Engineer and Surveyor, Town Hall, Willenhall. Tenders by Sept. 10.

GAS AND WATER SUPPLY

***Amesbury, Wilts.**—Regional water supply, contract 12, for R.D.C. Deposit £3 3s. Tenders by Sept. 28.

Antrim.—Supplying and laying the following pipes, together with all necessary valves, specials and ancillary works, contract 7, for R.D.C.: 3½ miles of 9 in. diameter asbestos-cement pipe; 1½ miles 8 in. diameter asbestos-cement pipe. Documents from the offices of W. D. R. and R. T. Taggart, consulting engineers, 13 College Gardens, Belfast. Deposit £5 5s. Tenders by Sept. 15.

Argyllshire.—Construction of a water supply on the Island of Gigha for C.C. The works consist of the construction of a pump-house, two concrete storage tanks, and approximately 6½ miles of 2 in. and 3 in. diameter asbestos-cement mains. Applications to the County Engineer, Lochgilphead, Argyll, by Sept. 5.

***Ballymoney, Antrim.**—Construction of Altnahinch dam for R.D.C. Deposit £25. Tenders by Oct. 28.

***Bicester, Oxon.**—Laying water main for U.D.C. Deposit £2 2s. Tenders by Sept. 27.

Biggleswade, Beds.—Supply and erection of two submersible pumps in boreholes, contract 6, for Water Board. The supply of the associated switchgear is not included. Documents from Binnie, Deacon and Gourley, engineers, Artillery House, Artillery Row, Westminster, London, S.W.1. Deposit £10, cheque payable to the Board. Tenders by Sept. 13.

Bingley, Yorks.—Laying of approximately 500 yd. of 6 in. diameter and 840 yd. of 4 in. diameter spun-iron pipes, together with ancillary works in Main Street, Wilsden, for U.D.C. Documents from A. Haslock, engineer and manager, 165 Main Street, Bingley. Tenders by Sept. 9.

Carmarthen.—Following at Llangynin, Cynwyl Elfed and Rhydarqueau for R.D.C.: Construction of three small pumping stations, a small concrete service reservoir of 20,000 gallons capacity, and supplying and laying about eight miles of 3 in. and 4 in. spun-iron pipes and about 1½ miles of 2 in. asbestos-cement pipes, all with flexible joints. Documents from T. E. Williams, clerk, 3 Spilman Street, Carmarthen, on and from Aug. 29. Deposit £5, cheque payable to R.D.C. Tenders by Sept. 26.

Castlederg, Tyrone.—Laying approx. 774 lin. yd. of 4 in. and 867 lin. yd. of 3 in. class B spun-iron watermain at Drumquin Road and Castlefin Road, for R.D.C. Documents from Clerk to the Council, Council Offices, Castlederg. Deposit £5 5s. Tenders by Sept. 9.

***Chelmsford, Essex.**—Laying water mains for R.D.C. Deposit £1 1s. Tenders by Sept. 19.

Chipping Norton, Oxon.—Laying approx. 2,000 yd. of 3 in. and 4 in. pressure asbestos water mains at Salford, near Chipping Norton, for R.D.C. Documents from the Surveyor, Hillside, Albion Street, Chipping Norton. Tenders by Sept. 12.

***Dursley, Glos.**—Water main extension to New Road North Nibley, for R.D.C. Deposit £2 2s. Tenders by Sept. 19.

***Huntingdon.**—Water mains at Brampton, for R.D.C. Deposit £2 2s. Tenders by Sept. 21.

Liverpool.—Supply and installation of filtration plant, Steble Street baths, for City Council. Documents from the Bath Manager and Engineer, 62 Fontenoy Street, Liverpool, 3. Tenders by Sept. 19.

Muckamore, Antrim.—Construction of water pipeline to hostel and high level tank, Greenmount Agricultural College, Muckamore, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by Sept. 12.

Romsey and Stocksbridge, Hants.—Northern parishes water supply, extension to Palestine, including building of a small brick pump-house, approximately 10 ft. sq., at Over Wallop for R.D.C. Documents from Lemon and Blizard, consulting engineers, Telford House, Hulse Road, Southampton. Deposit £3 3s. (cheque). Tenders by Sept. 19.

Southam, War.—Following at Southam booster station for R.D.C.: (a) The building of a flat roofed pump-house in brickwork and precast concrete—internal dimensions 27 ft. 6 in. by 17 ft. by 9 ft. high; (b) the provision of unskilled labour to assist machinery contractors with the erection of the plant; (c) the modification of existing pipework in the vicinity of the station. Applications to W. Herbert Bateman and Partners, consulting engineers, Chesterfield House, Bathaston, Bath, accompanied by the names and addresses of three engineers under whose direction the applicant has carried out similar work. Deposit £3 3s. Plans also seen by appointment at the offices of the Council, Coventry Road, Southam, near Leamington Spa, on and from Aug. 29. Tenders by Sept. 19.

Wales.—Miscellaneous main laying work in the area of the Swansea group of undertakings for Gas Board. Documents from Darrel W. Rees, group convenor, Wales Gas Board Offices, Murray Street, Llanelly. Tenders by Sept. 6.

***Workington, Cumb.**—Re-laying water mains for B.C. Tenders by Sept. 14.

HARBOURS, PIERS AND SEA DEFENCE WORKS

***Belfast.**—Reconstruction of oil berthage accommodation for Harbour Board. Tenders by Sept. 26.

HEATING AND VENTILATING

Armagh.—Following works in the proposed old people's home at Gilford Road, Portadown, for County Welfare Committee: (a) Heating, ventilating and plumbing installation; (b) electrical installation; (c) electric lift. Documents from the offices of Houston and Beaumont, architects, 9 Market Street, Lurgan, or J. R. W. Murland, consulting engineer, 13 Wellington Place, Belfast, 1. Deposit £3 3s. each. Tenders by Sept. 15.

Bridgnorth, Salop.—Installation of a hot water supply in 22 houses, together with the fixing of tiled fireplaces in place of existing cooking ranges, and other incidental works, for B.C. Documents from the Borough Surveyor, College House, Bridgnorth. Tenders by Sept. 24.

Down.—Following for County Welfare Committee: (1) Low pressure hot water heating installation at Croft House, Holywood. Documents from McCandless and Barton, consulting engineers, 6 Murray Street, Belfast, 1. Deposit £3 3s. (2) Building work and attendance upon the heating contractor nominated for the above installation. Applications to the County Planning Officer, English Street, Downpatrick. Tenders by Sept. 9.

Dublin, Eire.—Mechanical fuel handling equipment required at St. Ita's Hospital, Portrane, for Health Authority, consisting of reciprocating feeder, inclined conveyor, vertical elevator and discharge chutes. Documents from J. A. Kenny and Partners, consulting engineers, 44 Kildare Street, Dublin. Deposit £5 5s. cheque, payable to the Authority. Tenders by Sept. 15.

Enniskillen, Fermanagh.—Low pressure hot water heating, hot, cold and drinking water and compressed air service installations at post office garage, wash bay and workshop, Enniskillen, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by Sept. 15.

Middleton, Lancs.—Provision and installation of a small central-heating boiler, together with minor alterations to the existing heating and radiator installation at the Public Library for B.C. Applications to the Borough Surveyor, Town Hall, Middleton. Tenders by Sept. 19.

Northumberland.—Installation of a new central heating system at Whitley Bay Police Station, Whitley Bay, for C.C. Applications to the County Architect, 30-32 Great North Road, Newcastle upon Tyne, 2, by Sept. 5.

Reading, Berks.—Installation of central heating in the fire brigade workshops, Northumberland Avenue, for Berkshire and Reading Fire Authority. The installation will comprise a self-contained oil-fired air heater consisting of combustion chamber, heat exchanger and air fan, with necessary chimney, pipe work, ducting, and adaptations to the existing boiler house. Applications to E. R. Davies, clerk to the Authority, Shire Hall, Reading. Tenders by Sept. 7.

HOUSING SCHEMES

Aberaeron, Cards.—Eight pairs of B4D (N.A.) type houses and two pairs of OP8 type bungalows at Llanon Camp site, Llanon, together with the construction of estate road, footpaths, drainage, sewer, fencing works, etc., for R.D.C. Documents from J. Owen Parry and Lewis, architects, Ammanford, or S. G. D. Evans, clerk of the Council, Council Offices, 1 North Road, Aberaeron. Deposit £3 3s., payable to R.D.C. Tenders by Sept. 27.

Aberdeen.—The following works involved in the erection of six houses at Kincorth scheme, section 46, for City Council: Excavator, concrete, mason and brick; carpenter, joiner and ironmonger; slater and roughcast; plumber; lath and plaster; electrical; glazier; and supply and installation of fireplaces. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by Sept. 9.

***Atherstone, War.**—Dwellings at Warton for R.D.C. Deposit £2 2s. Tenders by Oct. 3.

Berkshire.—Pair of police houses in traditional brick construction at Stockham Way, Stockham, Wantage, for C.C. Documents from the County Architect, Wilton House, Parkside Road, Reading. Deposit £2 2s. Tenders by Sept. 27.

Billingham, Dur.—Ten bungalows at Finchale Avenue, contract period six months, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Haverton Hill. Deposit £2 2s. Tenders by Sept. 26.

Bristol.—Erection of three-storey block of nine dwellings (six one-bed flats and three bed-setting rooms) at St. Nicholas Road, St. Pauls, for City Council. Applications to the City Architect, Council House, College Green, Bristol, 1, by Sept. 5.

Bury St. Edmunds, Suffolk.—Seventeen houses and four flats, Hollow Road, for B.C. Documents from the Borough Engineer and Surveyor, Borough Offices, Bury St. Edmunds. Deposit £2 2s. Tenders by Sept. 9.

Chertsey, Surrey.—Thirty-six dwellings, 22 garages and site works, including demolition, access road and services at Liberty Lane, Addlestone, contract 68, for U.D.C. Applications to the Engineer and Surveyor, The Orchard, Staines Lane, Chertsey, 1. Sept. 9. Deposit £2 2s.

Cheshunt, Herts.—Erection of a small detached house and all ancillary works, including the demolition of a part-underground shelter at Waltham Cross playing fields, contract 370, for U.D.C. Documents from the Engineer and Surveyor, Manor House. Deposit £2. Tenders by Sept. 12.

Clogher, Tyrone.—Twelve houses with incidental road and drainage work for R.D.C. Documents from the offices of E. C. Harris and Partners, quantity surveyors, Ulster Bank Buildings, Crumlin Road, Belfast. Deposit £5 5s. Plans also seen at the offices of Munce and Kennedy, architects, 133 University Street, Belfast, 7. Tenders by Sept. 9.

Coseley, Staffs.—Thirteen blocks of two-storey two-bedroom flats, two blocks of two-storey one-bedroom flats (60 dwellings) and a block of six garages at Wallbrook housing site IV (Rounds Hill Road) for U.D.C. Applications to Joseph C. Roper, clerk of the Council, Council House, Coseley, by Sept. 5. Deposit £2 2s (cheques payable to U.D.C.). Tenders by Oct. 10.

Fife.—All trades for 12 traditional houses at Thornton 13th development for C.C. Applications to the County Clerk, Cupar, Fife, by Sept. 7.

Fulwood, Lancs.—Construction of roads, sewers and land drainage works at aged persons' bungalows on land off Sharoe Green Lane South, for U.D.C. The scheme consists of approx. 1,500 sq. yd. of carriageway; 1,000 sq. yd. of footways; 500 lin. yd. of precast concrete kerbs; 320 lin. yd. of 9 in. and 6 in. salt-glazed ware sewers, including manholes and ancillary works, and some land drainage work. Documents from the Engineer and Surveyor, Council Offices, Garstang Road, Fulwood. Deposit £2 2s. Tenders by Sept. 20.

Holmfirth, Yorks.—Following for U.D.C.: (a) Construction of roads and sewers; (b) erection of 32 dwellings, at Roundway housing estate, Holmfirth. Applications in writing before Sept. 14, to (a) the Surveyor, Market Street, Holmfirth; and (b) P. N. Brown and Son, Market Place, Holmfirth. Deposit £2 2s., cheque each. Tenders by Oct. 10.

***Market Drayton, Salop.**—Flats, bungalows and garages, etc., for U.D.C. Deposit £2 2s. Tenders by Sept. 26.

Northern Ireland.—Construction of 299 dwellings and 96 garages, together with ancillary and engineering works, at Dunmurry (Conway), for Housing Trust. Documents from the offices of the Trust, 12 Hope Street, Belfast, 12. Deposit £3. Tenders by Sept. 28.

Port Talbot, Glam.—Forty-four dwellings at Harry site, Sandfields, for B.C. Documents from G. V. Griffiths, borough engineer, Municipal Buildings, Port Talbot. Deposit £2 2s. Tenders by Sept. 19.

Prestwich, Lancs.—Two blocks of 12 flats each in the Heaton Park redevelopment areas 1 and 2 (Infant Street) for B.C. Documents from the Borough Engineer, Town Hall, Prestwich. Deposit £5 5s. Tenders by Sept. 27.

Reading, Berks.—Twenty-two dwellings and six garages at The Mount, Albert Road, Caversham, for B.C. Documents from the Borough Architect, Town Hall, Reading, on or after Sept. 2. Deposit £2 2s. (cheques payable to the Corporation). Tenders by Sept. 26.

Totnes, Devon.—Following for R.D.C.: (a) one pair of semi-detached bungalows at Butterlake; (b) one pair of semi-detached bungalows at Furzegood, together with incidental works and services. Documents from the Engineer and Surveyor, Council Offices, Higher Plymouth Road, Totnes. Deposit £2 2s. each. Tenders by Sept. 29.

Truro, Corn.—Eight bungalows and road-works at Perranarworthal for R.D.C. Applications to J. H. Snellgrove and Partners, quantity surveyors, 47 Coinagehall Street, Helston, by Sept. 6. Deposit £2 2s., payable to R.D.C. Plans seen at the offices of Alfred J. Cornelius, architect, 13 Lemon Street, Truro. Tenders by Oct. 11.

Walton and Weybridge, Surrey.—Erection of 54 flats in five three-storey blocks on the Sandy Lane housing site, Walton-on-Thames, for U.D.C. Documents from the office of the Engineer and Surveyor to the Council, Council Offices, Walton-on-Thames. Tenders by Oct. 6.

***Whitchurch, Salop.**—Forty-four dwellings for U.D.C. Deposit £3 3s. Tenders by Oct. 1.

York.—Following for City Council: (a) 82 dwellings at Chapel Fields estate, York; (b) 72 brick garages on six separate sites, York. Documents from E. Firth, city architect, 8 St. Leonard's Place, York. Deposits of £3 and £1, respectively, or £3 collectively (cheques payable to York Corporation). Tenders by Sept. 23.

MATERIALS AND SUPPLIES

Castlereagh, Down.—Supply of 272 sink units with stainless steel tops, for R.D.C. Documents from the Council Offices, 368 Cregagh Road, Belfast, 6. Deposit £3. Tenders by Sept. 9.

***Huddersfield, Yorks.**—Supply of bollards and advance direction signs for B.C. Tenders by Sept. 19.

Lancashire.—Supply of the following for C.C.: (1) Anti-freeze solution; (2) sponges and cleaning rags. Documents from the Chief Fire Officer, Lancashire County Fire Brigade, Headquarters, Fulwood, Preston. Tenders by Sept. 9.

Middlesbrough, Yorks.—Supply of 100 folding garage doors, 7ft. 4in. wide by 6ft. 6in. high, for B.C. Documents from the Borough Engineer, Municipal Buildings, Middlesbrough. Tenders by Sept. 3.

Staffordshire.—Supply of anti-freeze compound (type B), for C.C. Documents from the Clerk of the County Council, County Buildings, Stafford. Tenders by Sept. 6.

MISCELLANEOUS

Loughborough, Leics.—Supply and fitting of the following for B.C.: Carpet for committee room 8yd. by 4yd.; carpet for retiring room 6yd. by 4yd.; curtains for committee and retiring rooms. Tenderers are asked to quote for various qualities of carpeting and for curtain material other than velvet. In all cases samples should be submitted if possible. Both rooms will be made available for inspection during normal office hours expect on Sept. 8. Tenders endorsed "Carpets and Curtains" to Arthur Usher, town clerk, Southfields, Loughborough, by Sept. 20.

PLANT AND MECHANICAL TRANSPORT.

Consett, Dur.—Supply and delivery of one Karrier house refuse vehicle, 10 cu. yd., for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Medomsley Road, Consett. Tenders by Sept. 23.

Eccles, Lancs.—Supply and delivery of one 750/800 gallon capacity diesel gully emptier, complete, for B.C. Documents from Borough Engineer and Surveyor, Town Hall, Eccles. Tenders by Sept. 12.

Eccles, Lancs.—Supply and delivery of one battery-driven vehicle of a capacity of 175/200 gallons equivalent to a load of about one ton, for use on back street gully emptying, for B.C. Documents from Borough Engineer and Surveyor, Town Hall, Eccles. Tenders by Sept. 12.

Liverpool.—Supply of a steel manure box trucks, 19 cu. ft. capacity on steel chassis with cast-iron wheels, for City Council. Documents from the General Manager, Markets Department, Stanley Abattoir, Liverpool, 13. Tenders by Sept. 20.

Manchester.—Supply of one four-ton mastic asphalt mixer, chassis-mounted, on four pneumatic-tyred wheels for City Council. Documents from the City Surveyor, Town Hall, Manchester, 2. Tenders by Sept. 6.

Pontypridd, Glam.—Supply and delivery to Mill Field depot of the following vehicles for U.D.C.: (Contract a) Two Karrier Gamecock general haulage vehicles and two Karrier Bantam dual tip refuse collecting vehicles; (b) one Ford Thames 7cwt. van. Documents from W. Cecil Evans, engineer and surveyor, Municipal Buildings, Pontypridd. Tenders by Sept. 5.

PLAYING FIELDS, PARKS, ETC.

***Barnet, Herts.**—Turfing and seeding areas around the flats on the Whittings Hill housing estate for U.D.C. Tenders by Sept. 17.

***Droitwich, Worcs.**—Construction of playing field at Poplars Meadow, for B.C. Deposit £2 2s. Tenders by Sept. 12.

Dudley, Worcs.—Development of public open space, Wolverton Road, for B.C., consisting of 10,000 cu. yd. of earthmoving, 2,500 sq. yd. of bituminous macadam surfacing to car park, 5,000 sq. yd. of cold asphalt surfacing to footpaths and playgrounds, drainage, fencing and installation of playground equipment. Applications to the Borough Engineer, Council House, Dudley, by Sept. 12. Deposit £2 2s. Tenders by Oct. 10.

Hull.—Removal of trees, grading and levelling of approx. 38 acres of land at the Longhill playing fields, Longhill estate, for City Council. Documents from the Parks, etc., Department, 79 Ferensway, Kingston-upon-Hull. Tenders by Sept. 12.

***Lancashire.**—Development of playing fields, etc., for C.C. Apply by Sept. 5.

***Mexborough, Yorks.**—Construction of Wath Road sports ground, for U.D.C. Deposit £3 3s. Tenders by Oct. 1.

Oxford.—Laying out of the Barton Village Road Recreation Ground for City Council. The work will involve the construction of a brick pavilion of 2,600 f.s. floor area, a bowling green, hard tennis courts, a car park, access road and drainage works. Applications to the City Engineer, Town Hall, Oxford, by Sept. 9.

Southampton.—Formation of playing fields on west side of Stoneham Lane for B.C., including earthwork, drainage, tennis courts, water supply, planting and seeding. Written applications to the Borough Architect, Civic Centre, Southampton, by Sept. 3. Tenders by Sept. 28.

Wallsend, Northumb.—Preparation of the playing field at Wallsend Central County Secondary School for Education Committee. Documents from the Borough Education Officer, Town Hall, Wallsend. Tenders by Sept. 14.

Wilton, Wilts.—Re-turfing the cricket table at the playing field, Wilton, for B.C. Documents from the Borough Surveyor, Council Offices, Wilton. Tenders by Sept. 9.

ROADS, BRIDGES AND SITE WORKS

Aldershot, Hants.—Construction of footways and carriageways, together with ancillary drainage, at Denmark Street, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Aldershot. Deposit £2 2s. Tenders by Sept. 26.

Atherstone, War.—Site preparation works at Warton housing estate 3, comprising approximately the following: 257 lin. yd. of 6in. and 9in. diameter sewers; 235 lin. yd. of precast concrete kerbing; 650 super. yd. of ashed, pitched and tarmacadam carriageways; 650 super. yd. of precast concrete footpaths, together with general site grading, excavation, and other works incidental thereto. Documents from D. C. Smith engineer and surveyor, Council Offices, Atherstone. Deposit £2 2s. Tenders by Sept. 19.

***Banstead, Surrey.**—Brighton Road A.217, improvement at Margery Lane junction for U.D.C. Deposit £3. Tenders by Sept. 20.

Bath.—Snow Hill redevelopment, phase II, construction of roads, sewers and ancillary works, for City Council. Documents from the City and Waterworks Engineer, Guildhall, Bath. Deposit £2 2s. Tenders by Sept. 12.

***Bedfordshire.**—Improvement of trunk road A.428 for C.C. Deposit £2 2s. Tenders by Sept. 16.

***Berkshire.**—Making-up Rochdale Road, for C.C. Deposit £2. Tenders by Sept. 16.

Berkshire.—Construction of advance road and drainage works on the Nursery and Joy Mount sites, Oxford Road, Abingdon, for C.C. The works are as follows: 1,800 sq. yd. of clinker and hardcore foundation; 1,800 sq. yd. of tarspray and chippings; 740 lin. yd. of 22in. by 6in. concrete haunch; 370 lin. yd. of 9in. surface water drain; 55 lin. yd. of 6in. surface water drain, together with excavation, manholes, gullies and appurtenant works. Documents from the County Surveyor, Shire Hall, Reading. Deposit £2. Tenders by Sept. 12.

***Berkshire.**—Reconstruction of Bay Road, Bracknell, for C.C. Deposit £2 2s. Tenders by Sept. 21.

Birmingham.—Construction of approx. 185yd. of 10ft. carriageways, together with the surfacing, at Birmingham Airport, Edmdon, for City Council. Documents from the office of Sir Herbert J. Manzoni, city engineer and surveyor, Civic Centre, Birmingham, 1. Deposit £2 2s. Tenders by Sept. 14.

***Bolton, Lancs.**—Street and sewerage works for B.C. Tenders by Sept. 16.

***Bromley, Kent.**—Disposal of destructor screenings for B.C. Tenders by Sept. 14.

***Bromsgrove, Worcs.**—Rock Hill and Ednal Lane improvement. Deposit £2 2s. Tenders by Sept. 24.

Cannock, Staffs.—Longford Road, Cannock—34 housing site (first phase), roads and sewers, for U.D.C. The work comprises the construction of approximately 3,500 lin. yd. of bituminous macadam carriageways (16ft. 22ft., 24ft. wide); 700 lin. yd. of concrete carriageways (14ft. wide); 3,850 lin. yd. of storm and foul sewers (6in. to 24in. diameter), together with ancillary works. Documents from the offices of the Engineer and Surveyor, Council House, The Green, Cannock. Deposit £3 3s. Tenders by Sept. 17.

***Carmarthenshire.**—Improvement north of Llannon Road junction, for C.C. Deposit £2. Tenders by Sept. 15.

Cheshunt, Herts.—Turners Hill/College Road (The Triangle), contract 378, comprising construction of a traffic roundabout and ancillary works, together with the provision and erection of group A lighting for U.D.C. Documents from the office of the Engineer and Surveyor, Manor House, Cheshunt. Deposit £2. Tenders by Sept. 16.

Dartford, Kent.—Extraction of sand and gravel at Temple Hill for B.C. Documents from the Town Clerk, Council Offices, High Street, Dartford. Deposit £5 5s. Tenders by Nov. 21.

***Derby.**—Construction of roads, sewers and ancillary works at Shardlow Road housing estate, Alvaston, for B.C. Deposit £5 5s. Tenders by Sept. 16.

***Dudley, Worcs.**—Development of public open space, Wolverton Road, for B.C. Deposit £2 2s. Tenders by Sept. 12.

Dumfriesshire.—Carlisle-Glasgow trunk road A.74. Beattock diversion, for C.C., works extend for a length of about three miles and include the construction of dual and single carriageways, bridges, culverts and drainage works. Documents from Leslie T. Carnegie, county clerk, County Buildings, Dumfries. Deposit £10 10s. Plans seen at the office of the County Surveyor, County Buildings, Dumfries. Contractors will be met at Skellywell, Beattock, at 11 a.m., Sept. 6. Tenders by Oct. 10.

***Ealing, Middx.**—Filling-in of tanks at southern works for B.C. Tenders by Sept. 23.

***Egham, Surrey.**—Widening of Christchurch Road, Virginia Water, for U.D.C. Tenders by Sept. 24.

***Felixstowe, Suffolk.**—Private street improvement works for U.D.C. Deposit £2 2s. Tenders by Sept. 21.

Fulwood, Lancs.—Making-up of Sharoe Mount Avenue for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Garstang Road, Fulwood. Deposit £2 2s. Tenders by Sept. 13.

***Gloucester.**—Construction of acceleration and deceleration lanes for City Council. Deposit £2 2s. Tenders by Sept. 14.

***Gloucestershire.**—Reconstruction of Morton-Oldbury Naite road, for C.C. Deposit £10. Tenders by Oct. 5.

***Harlow, Essex.**—District roads improvement, for U.D.C. Deposit £2 2s. Tenders by Sept. 17.

***Hastings, Sussex.**—Road works for B.C. Deposit £2 2s. Tenders by Sept. 19.

***Havant and Waterloo, Hants.**—Improvement of Hambledon Road, for U.D.C. Tenders by Sept. 15.

***Heywood, Lancs.**—Asphalt surfacing for B.C. Deposit £2 2s. Tenders by Oct. 8.

Holywood, Down.—Following for U.D.C.: Reconstruction of approx. 2,300 sq. yd. carriageway; 600 lin. yd. kerbing and channelling.

and 1,500 sq. yd. precast concrete flagged footpaths, together with other ancillary works, and, in addition, the laying of 600 lin. yd. of 5in. spun-iron water main, together with the necessary specials and fittings, and road reinstatement in Church View. Documents from R. Grundy, town surveyor, Council Offices, Hollywood. Deposit £5 5s. Tenders by Sept. 9.

***Hornchurch, Essex.**—Supply and erect road signs for U.D.C. Deposit £2 2s. Tenders by Sept. 19.

Inverness-shire.—Construction of the Balmach Township Road, Skye, approx. 1½ miles in length, for C.C. Documents from the County Surveyor, County Buildings, Ardross Street, Inverness. Tenders by Sept. 20.

Inverness.—Construction of 375 sq. yd. of bitumen macadam footpath on the west side of Perth Road at Culcabock, together with ancillary works, for B.C. Documents from Burgh Surveyor, Town House, Inverness. Tenders by Sept. 17.

***Keighley, Yorks.**—Making-up Laburnum Grove, for B.C. Tenders by Sept. 15.

Lancashire.—Formation of a bus parking space at the Shevington County Secondary School for C.C. Work includes the widening of existing entrance drive and construction of a roundabout and tarmac roads and brick entrance wing walls. Applications to the County Architect, P.O. Box 26, County Hall, Preston, by Sept. 5.

Lancashire.—Construction and completion of roadworks in Parklands Close and Parklands Avenue, Penwortham, in the Rural District of Preston, for C.C. Documents from County Surveyor and Bridgemaster, P.O. Box 9, Preston. Deposit £2, cheques payable to C.C. Plans seen at County Surveyor's Office, 9 Fishergate Hill, Preston. Tenders by Sept. 9.

Leicester.—Knighton Road (part) improvement—reconstruction of carriageway, footways and miscellaneous works for City Council. The works include 700 sq. yd. lean mix concrete carriageway; 1,500 sq. yd. bitumen macadam surfacing to carriageway; 1,700 sq. yd. bitumen macadam footways; 100 sq. yd. 9in. brickwork boundary wall, together with site clearance and accommodation works. Documents from John L. Beckett, city surveyor, Town Hall, Leicester. Deposit £1 1s. Tenders by Sept. 21.

Leicester.—Reconstruction of a section of route A.50 from the Leicester city boundary to Highfields Drive, Wigston, a length of approximately half a mile for City Council. The work consists of the provision of dual 24ft. carriageways in flexible construction, footpath, drainage and accommodation works. Documents from the County Engineer and Surveyor, County Offices, Grey Friars, Leicester. Deposit £5. Tenders by Sept. 16.

Leominster and Wigmore, Heres.—Following works for R.D.C.: (a) Construction of car park at Etam Street, Leominster, including pitched foundation, surface water drainage, fencing and ancillary works; (b) erection of garage and store building on the above car park. Documents from the Council Offices, 11 Corn Square, Leominster. Deposit £2 2s. each. Tenders by Sept. 8.

***Lowestoft, Suffolk.**—Making-up of Clover Way, for B.C. Deposit £2 2s. Tenders by Sept. 20.

Luton, Beds.—Making-up of Thrift Road, Heath and Reach (total approximate length 240yd.), with pitched carriageway, surfaced with tarmacadam, tarmacadam footways, surface water drainage and other ancillary works, for R.D.C. Documents from the Engineer and Surveyor, 48 Bute Street, Luton. Deposit £2 2s, cheque payable to R.D.C. Tenders by Sept. 24.

***Lymington, Hants.**—Making-up of Seacroft Avenue, etc., for B.C. Deposit £2 2s. Tenders by Oct. 3.

***Maidenhead, Berks.**—A.308, six cross-roads improvement, for B.C. Deposit £2. Tenders by Sept. 22.

***Margate, Kent.**—Resurfacing of roads for B.C. Tenders by Sept. 17.

***Middleton, Lancs.**—Roadworks at Woodhill redevelopment area for B.C. Deposit £2 2s. Tenders by Sept. 15.

Monmouthshire.—Road improvement between Llantarnam and Cwmbran Cemetery entrance (route B.424) for C.C., including the demolition of brick and masonry forecourt walls, the taking down of gates and garages, the rebuilding of walls and garages, partly in existing materials and partly in new and the re-fixing of gates. The work can be commenced at an early date. Documents from the office of the County Engineer and Surveyor, Stelvio, Bassaleg Road, Newport. Tenders by Sept. 17.

Morecambe and Heysham, Lancs.—Making-up of the following for B.C.: Stickland Drive, 400yd.; Beaufort Road (part), 236yd.; Farnlea Drive, 35yd.; Huntley Close, 53yd.; Azalea Grove, 43yd.; Easdale Avenue, 60yd.; Fairhope Avenue, 217yd.; Tomlinson Road

(part), 35yd.; St. Christophers Way, 323yd.; Sugham Lane, 233yd.; Stanhope Avenue (part), 40yd.; Coniston Road, 190yd. Applications to the Borough Engineer and Surveyor, Town Hall, Morecambe and Heysham, by Sept. 9.

Newhaven, Sussex.—Surfacing by machine of approximately 1,600 sq. yd. of ½in. fine cold asphalt of Meeching Road (part) for U.D.C. Documents from A. E. Motyer, engineer and surveyor, Council Offices, Fort Road, Newhaven. Tenders by Sept. 19.

Newcastle-under-Lyme, Staffs.—Advance preparation at Silverdale industrial estate for B.C., including approximately 300yd. of 6in. and 9in. g.s.w. sewers; four manholes and four lamp eyes; seven gullies and connections; 1,320 sq. yd. of carriageway; 425 lin. yd. of kerb foundation. Documents from the office of the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs. Tenders by Sept. 12.

Newark-on-Trent, Notts.—Hawton estate—additional roads for B.C., comprising construction of approximately 770 sq. yd. carriageway foundations; 1,560 sq. yd. asphalt surfacing; 1,300 sq. yd. of footway, and provision and laying of approximately 280 lin. yd. precast concrete kerbs, and ancillary works. Documents from the office of the Borough Surveyor, Municipal Buildings, Newark-on-Trent. Deposit £2 2s. Tenders by Sept. 10.

Ogmore and Garw, Glam.—Advance preparation of North Bettws housing site for 62 houses, contract 1, for U.D.C. The work to include site clearance and excavation, approximately 3,500 sq. yd. of pitching, and 2,800 lin. yd. of soil and surface water sewers up to 15in. in diameter. Documents from the offices of the Surveyor, Council Offices, Brynmynyn, Glam. Deposit £3 3s. Tenders by Sept. 12.

***Orpington, Kent.**—Making-up St. Aubyns Close and St. Aubyns Gardens for U.D.C. Deposit £2 each. Tenders by Sept. 26.

***Oxfordshire.**—Making-up Milldown Road, Goring-on-Thames, for C.C. Tenders by Sept. 16.

Peterborough.—Gunthorpe Road and bridge reconstruction for City Council. Work includes approximately 11,500 sq. yd. of roadway, prestressed bridge girders, surface water sewer and water mains. Documents from the City Engineer, Town Hall, Peterborough. Deposit £2. Tenders by Sept. 13.

***Poole, Dorset.**—Herbert Avenue reconstruction. Deposit £2 2s. Tenders by Sept. 19.

Poole, Dorset.—Following for B.C.: Coy Pond Road (part), Thwaite Road, Havelock Road—making-up of three streets (total length half-mile) and works of surface water drainage. Documents from the Borough Engineer, Council Offices, Poole. Deposit £2 2s. Tenders by Sept. 19.

***Rochester, Kent.**—Making-up of old Patens Lane, stage 1, City Way to Boundary Road, for City Council. Deposit £2 2s. Tenders by Sept. 16.

Scotland.—Reconstruction of bridge over railway at Whitecraigs Station trunk road A.77 for Scottish Home Development. Reconstruction and widening of the railway bridge with mass concrete abutments and a steel beam and concrete slab deck. Documents from Kyle and Frew, consulting engineers, 9 Clairmont Gardens, Glasgow, C.3, and plans seen as from Sept. 1. Deposit £5, payable to the order of the Queen's and Lord Treasurer's Remembrancer. Tenders by Sept. 26.

***Sawbridgeworth, Herts.**—Sheering Mill Lane Road improvement for U.D.C. Tenders by Sept. 19.

Shipley, Yorks.—Construction of the undermentioned streets for U.D.C.: Dallam Road, 222yd.; Carlton Road, 137yd. Documents from the Surveyor, Town Hall, Shipley. Deposit £1 1s. Tenders by Sept. 10.

Staffordshire.—Construction of a dual carriageway diversion of the Worcester-Wolverhampton-South of Stafford trunk road, A.449, at Battlefield, near Wombourne, for C.C. The work includes bulk excavation, fencing, walling, kerbing, lean concrete carriageway foundation, surface water drainage, bituminous macadam running surface and final surfacing in hot-rolled asphalt. A small span reinforced concrete river bridge is also to be constructed. Documents from T. H. Evans, clerk of the County Council, County Buildings, Stafford. Deposit £5. Tenders by Sept. 20.

Sunderland, Dur.—Reconstruction of Washington Road, for B.C., comprising approx. 420 lin. yd. of 9in. s.w.d. sewers, 8,250 sq. yd. of 8in. reinforced concrete carriageway and 3in. bituminous macadam surfacing. Documents from the Borough Engineer, 27 Fawcett Street, Sunderland. Deposit £2 2s., cheques payable to Corporation. Tenders by Sept. 9.

***Surrey.**—Road widening at Windlesham for C.C. Tenders by Sept. 26.

Sutton Coldfield, War.—Surface water drainage, road foundation, kerbing, paving and surfacing of Broomie Close, for B.C. The length of the works is approximately 190 lin. yd. Documents from the Borough Surveyor's Office, Council House, Sutton Coldfield. Deposit £2. Tenders by Sept. 8.

Surbiton, Surrey.—Cycle training set, Fullers Way School, stage I works for B.C., comprising s.w. sewer connection and construction of concrete carriageways. Documents from the office of R. Thirlway, borough engineer and surveyor, Council Offices, Ewell Road, Surbiton. Tenders by Sept. 23.

Surrey.—Resurfacing 3,500 sq. yd. of carriageway in bituminous macadam, widening 325 sq. yd. carriageway in concrete, and ancillary works, on the Dorking By-pass (A.24) for C.C. Documents from the County Engineer, Highways and Bridges Department, County Hall, Kingston-upon-Thames. Tenders by Sept. 10.

***Taunton, Som.**—Construction of car park for B.C.

Thetford, Norfolk.—Road and sewer works on the Magdalen Street housing estate, for B.C., comprising approx. 1,360 sq. yd. reinforced concrete carriageway, 1,000 sq. yd. tarmacadam footpath with concrete edging kerbs and 75 lin. yd. 6in. diameter foul sewers, with other drainage works. Documents from W. R. F. Jennings, borough surveyor and engineer, Municipal Offices, Thetford. Tenders by Sept. 20.

Thornton Cleveleys, Lancs.—Making-up of (1) Kingsway, Cleveleys, (2) Balmoral Place, Thornton, for U.D.C. Documents from J. E. Porter, engineer and surveyor, Council Offices, Thornton Cleveleys, Blackpool. Deposit £2 2s. Tenders by Sept. 14.

***Tipton, Staffs.**—Summerhill Bridge demolition and regrading of approaches, Upper Church Lane, for B.C. Deposit £2 2s.

Walsall, Staffs.—Surfacing of the drill yard and access road at Bloxwich fire station, for B.C., approx. 530 sq. yd. in area, together with drainage and other ancillary works. Documents from M. E. Habershon, borough engineer and surveyor, Council House, Walsall. Deposit £2 2s. Tenders by Sept. 5.

West Riding.—Hemsworth C.P. J.M. School—repairs to asphalt for C.C. Documents from H. Cockell, assistant divisional education officer, 2 St. John's Square, Wakefield. Tenders by Sept. 10.

Whitby, Yorks.—Highways maintenance and improvement, contract 229, for U.D.C. The work consists of kerbing, flagging, tarmacadam patching, concrete road construction, concrete footpath construction, hot rolled asphalt surfacing and sundry works. Only contractors with a large and skilled labour force need apply since the works will require several gangs to be working simultaneously. Applications to the Engineer and Surveyor, St. Hilda's Terrace, Whitby. Tenders by Sept. 12.

Wirral, Ches.—Construction of road and sewer works at Pensay Hall estate, stage 1, for U.D.C., comprising approximately 390yd. of carriageway, 74yd. of 15in. diameter sewer, 87yd. of 12in. diameter sewer, and 772yd. of 9in. diameter sewer. Documents from the Engineer and Surveyor, Council Offices, Heswall, Wirral. Tenders by Sept. 17.

Wirral, Ches.—Making-up of Nigel Road, Barnston (approximate length 140 lin. yd.) for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Heswall, Wirral. Tenders by Sept. 10.

Woking, Surrey.—Completion works at Sundridge Road, St. Peters Road, Mulgrave Way for U.D.C., comprising approximately 1,800 sq. yd. of surfacing, footpaths, hardstanding and ancillary works. Documents from the Engineer and Surveyor, Council Offices, Woking. Deposit £2 2s. Tenders by Sept. 21.

Worcestershire.—Making-up of Mill Lane, Blakedown, for C.C. Documents from the County Surveyor, County Buildings, Worcester. Deposit £2 2s. Tenders by Sept. 12.

Workington, Cumb.—Surface dressing to approximately 10,900 sq. yd. of carriageways for B.C. Documents from the Borough Engineer and Surveyor, Stoneleigh, Park End Road, Workington. Tenders by Sept. 14.

Workson, Notts.—Machine surfacing of approx. 20,000 sq. yd. of carriageway for B.C. Documents from the Borough Engineer, Park House, Workson. Tenders by Sept. 9.

Wrexham, Denbigh.—Supply and delivery and erection of street lighting columns, brackets, lanterns and lamps, scheme 4, for B.C. Documents from the office of the Borough Engineer and Surveyor, 31 Chester Street, Wrexham. Tenders by Sept. 9.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Angus.—Laying approximately 112yd. 6in. diameter F.C. sewer together with precast concrete manholes, 172yd. 3in. diameter

asbestos-cement water main and other relevant work at Inverkeilor housing, fifth development, for C.C. Documents from the office of the County Engineer, County Buildings, Forfar. Tenders by Sept. 19.

Aberdeenshire.—Enlargement of E. and W. settling tanks at Alford for C.C., including the following works: (1) Settling tank of 12,000 gallons capacity in mass and reinforced concrete, to be built alongside existing W. settling tank; (2) settling tank of 1,000 gallons capacity in mass concrete, to be built alongside existing E. settling tank. Documents from the office of the County Surveyor, 4 Albion Place, Aberdeen. Deposit £2. Tenders by Sept. 15.

Berkshire.—Laying of approx. 600ft. of 6in. drains (including five manholes) at a site for a new Secondary Modern School at Coxwell Road, Faringdon, for C.C. Documents from the County Architect, Wilton House, Parkside Road, Reading. Deposit £2 2s. Tenders by Sept. 6.

Bromsgrove, Worcs.—Catshill surface water relief scheme for U.D.C. Deposit £2 2s. Tenders by Sept. 24.

Carmarthenshire.—Erection of new sanitary offices, sewage purification plant and drainage at Cilgwyn V.C. School, near Llandovery, for C.C. Applications to W. T. Lloyd, county architect, County Hall, Carmarthen, by Sept. 3. Tenders by Sept. 24.

East Grinstead, Sussex.—Following contracts, which are to proceed concurrently for U.D.C. and Godstone R.D.C.: (Contract 1) with the Godstone Rural District Council. Construction of a sewage disposal works near Felbridge (to serve a population of about 6,000), comprising grit channels, circular settlement tanks, percolating filters and humus tanks, also sludge digestion tanks, sand filters and a pumping station, all mainly in reinforced concrete, together with all necessary interconnecting pipework and chambers, roads, areas, footpaths, cuttings and embankments, and other appurtenant works; (2) with the same authority, for the construction of 500 lin. yd. of 21in. diameter outfall sewer, 1,900 lin. yd. of 18in., 15in. and 12in. main sewer, and 3,100 lin. yd. of 6in. and 7in. diameter branch sewers throughout the village of Felbridge, complete with manholes, flushing chambers, vent columns and appurtenant works; (3) with the East Grinstead U.D.C., for the construction of 1,020 lin. yd. of 15in. and 18in. main sewer from the existing North End pumping station to the district boundary at Felbridge, and some 1,500 lin. yd. of 6in. diameter branch sewers in North End, complete with all necessary manholes, flushing chambers, vent columns, etc., a flume channel and recorder, and other appurtenant works. Documents from Lemon and Blizard, consulting engineers, 59 Tufton Street, Westminster, London, S.W.1. Deposit £5 5s., cheque each. Contract 1 and 2 payable to Godstone R.D.C. and for contract 3 to East Grinstead U.D.C. Plans also seen at the appropriate council offices. Tenders by Sept. 26.

Halifax, Yorks.—Warley surface water sewer for B.C. Deposit £2. Tenders by Sept. 16.

Havant and Waterloo, Hants.—Foul water sewer at Fishery Lane for U.D.C. Tenders by Sept. 15.

Hollingbourn, Kent.—Proposed treatment plant at Kingswood, Ulcombe, for the disposal of cesspool contents, for R.D.C. The work will be carried out in three sections, as follows: (Contract a) The clearance and root grubbing of approximately 10 acres of chestnut woodland and the levelling and ploughing of the site; (b) the construction of access and turning bay, reception tank in concrete and a brick garage-store; (c) the fencing of the site with approximately 975 lin. yd. of cleft chestnut spile fencing and the provision of access gate and posts. Documents from the Surveyor, Council Offices, 73 College Road, Maidstone. Deposit £1 1s., cheque payable to R.D.C. Tenders by Sept. 15.

Manchester.—Construction of sedimentation plant for City Council. Tenders by Oct. 31.

Market Harborough, Leics.—Laying of sewers at Great Easton, Brighthurst and Drayton, and the construction of a sewage disposal works at Great Easton, for R.D.C. The work will include the laying of about 2,250yd. of 9in. and 6in. diameter sewers, together with manholes and water connections, the laying of about 1,300yd. of 4in. diameter pumping main, the construction of a sewage disposal works and two pumping stations. Documents from Pick, Everard, Keay and Gimson, consulting engineers, 6 Millstone Lane, Leicester. Deposit £5 5s. Tenders by Sept. 30.

Oakengates, Salop.—Sewer at Wombridge for U.D.C., comprising about 300 lin. yd. of 12in. glazed-stoneware pipes together with ancillary works. Documents from the office of the Engineer and Surveyor, Council Offices,

Staff Road, Oakengates. Deposit £2 2s. Tenders by Sept. 20.

Plympton St. Mary, Devon.—Construction of approx. 494 lin. yd. of 9in. and 83 lin. yd. of 6in. concrete foul sewers with manholes and other works at Elburton Road, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Plympton. Deposit £2 2s. Tenders by Sept. 15.

Saffron Walden, Essex.—Ashdon sewerage and sewage disposal, for R.D.C. Apply by Sept. 12. Deposit £10.

Scalby, Yorks.—Construction of the following for U.D.C.: (a) 1,356 lin. yd. of 18in. diameter spun concrete relief sewer at Scalby (b) 144 lin. yd. of 15in. diameter spun concrete storm overflow sewer at Newby, together with the necessary manhole conversions and other ancillary works. Documents from D. H. Moore, consulting engineer, 12 Valley Bridge Parade, Scarborough. Deposit £2 2s. (cheque). Tenders by Sept. 20.

Stepney.—Reconstruction of sewer in Whitechapel Road for B.C. Deposit £2 2s. Tenders by Sept. 19.

Stepney.—Reconstruction of sewer in Cable Street for B.C. Deposit £2 2s. Tenders by Sept. 19.

Strood, Kent.—Construction of a new humus tank and ancillary works at the sewage disposal works, Allhallows-on-Sea, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Frindsbury Hill, Strood. Deposit £5 5s. Tenders by Sept. 19.

Wallsend, Northumb.—Coast road sewer for B.C. Deposit £5 5s. Tenders by Oct. 11.

Willesden, Middx.—Construction of approximately 130 lin. yd. of 9in. dia. sewer together with manholes and ancillary works at Denmark Road, Kilburn, N.W.6 for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Dyne Road, N.W.6. Deposit £2 2s. Tenders by Sept. 20.

Wirral, Ches.—Supplying and laying approximately 140 lin. yd. of 27in. diameter concrete pipes in an existing watercourse which runs through Thurstaston tipping site for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Heswall, Wirral. Tenders by Sept. 10.

Wycombe, Bucks.—Tylers Green, Hazelmere, Penn nad Holmer Green sewerage scheme for R.D.C. Tenders by Oct. 1.

York.—Construction of sewer at Middlethorpe for City Council. Deposit £2. Tenders by Sept. 13.

STREET LIGHTING

Burnham-on-Sea, Som.—Supply of 22 sodium lanterns, lamps and electrical gear, and for the supply and erection of 22 concrete street lighting columns, together with the fixing and wiring of the lanterns and electrical gear on the B.3139 and B.3140 contract 37, for U.D.C. Documents from G. Harvey Mayhew, engineer and surveyor, Manor House, Burnham-on-Sea. Deposit £2 2s. Tenders by Sept. 19.

Cheshunt, Herts.—Improved street lighting, 1960, for U.D.C., including the dismantling of existing gas and electric street lights and the supply and erection in 12 roads of 62 25ft. mounting height lighting columns and 147 15ft. mounting height lighting columns and the fixing of 140-W and 60-W sodium discharge lanterns and control gear. A p.c. sum is included for the supply of lanterns and control gear. Documents from the office of the Engineer and Surveyor, Manor House, Cheshunt. Deposit £2. Tenders by Sept. 16.

Haltemprice, Yorks.—Following for U.D.C.: Supply, erection and bringing into service of sodium lighting using specified lanterns, gear and 25ft. steel columns; (a) Kingston Road, Willerby, 110 installations; and (b) Hull Road and Wilson Street, Anlaby, 62 installations. Documents from the Engineer and Surveyor, Anlaby House, Anlaby. Deposit £1 each. Tenders by Sept. 12.

Kent.—Street lighting equipment at Borstal Hill roundabout, Whitstable, for C.C. Deposit £2.

Kirkby, Lancs.—Group A street lighting, 1960/61, East Lancashire Road, A.580, any or all of the following contracts for U.D.C.: (Contract 60/12) Supply only of 120 group A reinforced concrete columns, complete with brackets; (60/13) supply only of 120 group A totally enclosed 140-W sodium discharge lanterns, together with all lamps and control gear, etc.; (60/14) erection only of 120 group A concrete columns and brackets, fitting and wiring of 140-W sodium lanterns and equipment, and bringing into service of the whole installation. Documents from the office of the Engineer and Surveyor, Council Offices, Kirkby Hall, Kirkby. Deposit £2 each. Tenders by Sept. 12.

Leyton, Essex.—Removal and disposal of redundant street lighting columns, for

B.C. Documents from the Borough Engineer, Town Hall, Leyton, E.10. Deposit £2 2s. Tenders by Sept. 7.

Orpington, Kent.—Supply of group B concrete columns and brackets for U.D.C. Documents from L. W. Freeman, engineer and surveyor, Civic Offices, The Walnuts, High Street, Orpington. Deposit £2. Tenders by Sept. 26.

Oadby, Leics.—Supply and erection of 31 group B lighting units on Leicester Road and London Road, for U.D.C. The columns are to be aluminium with 60-W sodium lanterns and gear. Documents from the office of the Engineer and Surveyor, Municipal Offices, Oadby Frith, Oadby. Deposit £2 2s. Tenders by Sept. 14.

Southall, Middx.—Removal and disposal of cast-iron gas lamp columns for B.C. Tenders by Sept. 9.

Turton, Lancs.—Erection and installation only of street lighting equipment as follows, for U.D.C.: (a) 30 140-W sodium discharge lamps with prestressed reinforced concrete columns, mounting height 25ft., control gear and wiring, at Bolton Road and Bradshaw Road A.676, Bradshaw; (b) five 140-W sodium discharge lamps, with steel columns, mounting height 25ft., control gear and wiring, at Longsight, B.6196, Harwood. Documents from the office of the Engineer and Surveyor, Council Offices, Bromley Cross, near Bolton. Deposit £2 2s., cheque payable to U.D.C. Tenders by Sept. 12.

Workington, Cumb.—Class A street lighting for B.C. Tenders by Sept. 14.

INTERNATIONAL CONTRACTS

India.—Following for the office of India Supply Mission: Tender notice SE.234—diesel crawler tractor, 75-85 draw-bar h.p. comp.—quantity required, 17; also crawler tractor as above but with hydraulic bulldozer, quantity required, 40. Documents from the Co-ordination Branch, India Store Department, Bromyard Avenue, Acton, London, W.3, at a cost of 14s. 3d. per tender, and not refundable. Specimen copy of the above inquiry can be seen at India Store Department, Vehicles Branch, Bromyard Avenue, Acton, London, W.3, under reference S.3503/60/AKB/VEH. Tenders by Oct. 13, to Washington D.C., U.S.A.

Jamaica.—Sandy Gully project, Jamaica, for Ministry of Development. The scheme includes bridges, earth works (in dry and wet areas) and concrete channel construction (approx. six miles) and will probably exceed £1m. All persons interested should, in the first instance, send their names and addresses to the Permanent Secretary, Ministry of Development, 24 East Race Course, P.O. Box 512, Kingston, Jamaica, by Sept. 17. Deposit £100. The contractor is to arrange finance on a deferred payment basis over a period of seven years.

AWARDS

BUILDING AND DECORATING (See also Housing Schemes)

Bexley, Kent.—Painting of school premises, as follows, for B.C.: Bexleyheath County Secondary Boys—Moody and Taylor, £3,819; Upton County Primary—R. B. Butler, Ltd., £1,356; Danson County Primary—Direct Labour, £1,325 (recommended).

Birmingham.—Erection of a multi-storey car park at Longbridge works for the Austin Motor Co.—R. M. Douglas (Contractors), Ltd., 35 George Road, Erdington, Birmingham H. W. Weedon and Partners, architects, 45-47 Calthorpe Road, Edgbaston, and L. C. Wakeman and Partners, quantity surveyors, 11-12 Highfield Road, Edgbaston.

Chelmsford, Essex.—Erection of a five-storey administration centre at Springfield Road, for the Essex River Board—Holland & Hannen and Cubitts, Ltd., 1 Queen Anne's Gate, London, S.W.1, £289,734 (recommended).

Chester-le-Street, Dur.—Erection of concert hall at the Greenbank Club—Wright and Kellett, Ltd., Ashley Terrace, Chester-le-Street.

Croydon, Surrey.—Following for B.C.: (1) Erection of a medical room at Norbury Manor Junior Mixed School at Abingdon Road S.W.16, and (2) alterations to provide additional accommodation at West Thornton School for Lanfranc Secondary Girls' School—(1) G. F. Dean and Sons, 65 Clock House Road, Beckenham, £1,180 (accepted); Skinner and Partners, £1,639; (2) G. F. Dean and Sons, £418 (accepted);

Amber Builders, Ltd., £440; House and Reynolds, £491; E. Holbrook and Son, Ltd., £566.

Croydon, Surrey.—Following for B.C.: Conversion of Coombe Cliffe House into a teachers' centre—R. Ashworth and Son, 94 Villa Street, Camberwell, London, S.E.5, £3,677 (accepted); T. R. Roberts (Builders), Ltd., £4,055.

Adaptation to form science room at Heath Clark Grammar School, Waddon—Amber Builders, Ltd., 33 Selsdon Road, Croydon, £872 (accepted); E. Costar and Son, £899; House and Reynolds, £914.

Adaptations at Selhurst Grammar School for Boys—Skinner and Partners, Ltd., 307 London Road, Croydon, £4,250 (accepted); S. G. and A. Agombar £4,746; D. H. Page, £4,822; Grace and Marsh, Ltd., £5,166; R. D. Hope and Co., Ltd., £5,040; Truett and Steel, Ltd., £5,225; R. Mansell, Ltd., £5,294; E. Holbrook and Son (Cro.), Ltd., £5,263; Bridge Walker, Ltd., £6,779.

Construction of covered way, improvements to the entrance hall and staff room at Woodside Primary School—G. F. Dean and Sons, 65 Clock House Road, Beckenham, £555 (accepted); House and Reynolds, £694; Amber Builders, Ltd., £944.

Erection of two-classroom block with cloakrooms and stores at South Croydon Secondary Mixed School—J. E. Lesser and Sons, Ltd., Green Lane, Hounslow, Middx., £2,873 (accepted); Robert Hall and Co. (Kent), Ltd., £2,924; Medway Buildings and Supplies, Ltd., £3,233.

Conversion of general craft room to science room at South Croydon Secondary Mixed School—Amber Builders, Ltd., 33 Selsdon Road, Croydon, £787 (accepted); J. Kimber, Ltd., £836.

Darlington, Dur.—Erection of practical accommodation at Salter Lane Open-air School for B.C. E. A. Tornbohm, borough architect—Snowdon of Darlington, 4 Duke Street, Darlington, £7,530.

Extensions to engineering works for Whessoe, Ltd.—Bovis, Ltd., 1 Stanhope Gate, London, W.1. Work commenced.

Guildford, Surrey.—Redevelopment of 62-64 High Street and 44-46 North Street as a store for Marks and Spencer, Ltd. Lewis and Hickey, architects, 130 Regent Street, London, W.1—Bovis, Ltd., 1 Stanhope Gate, London, W.1. Estimated cost £1m.

Harrogate, Yorks.—Office block extensions and experimental laboratories for the fibres division of Imperial Chemical Industries, Ltd.—G. Wimpey and Co., Ltd., Hammersmith Grove, London, W.6. Estimated cost £230,000.

High Wycombe, Bucks.—Repairs at Little Market House for B.C.—William Hartley and Sons, Ltd., Wexham, Slough, £7,320 (recommended).

Hillsborough, Down.—Erection of Council offices for R.D.C. William Barklie Maxwell, architect, 5 University Terrace, Belfast, 7—John Graham (Dromore), Ltd., Dromore, Down, £45,370 (recommended);

Houghton-le-Spring, Dur.—Factory additions for Bursgreen, Ltd. Mauchlen, Weightman and Elphick, architects, 12 Saville Row, Newcastle upon Tyne—William Norman, West Lane, Chester-le-Street. Work commenced.

Hull.—Erection of licensed premises at Douglas Road, Longhill estate, for Joshua Tetley and Son, Ltd., Herries Road, Sheffield. Plans by J. Foster, staff architect—J. A. Bell (Hull), Ltd., 67 Northumberland Avenue, Hull.

Limerick, Eire.—Erection of five-storey building with roof space for parking 50 cars at O'Connell Street for William Todd and Co., Ltd.—P. J. Wallace and Son, North Strand, Dublin. Estimated cost £250,000.

Ludlow, Salop.—Stage four of the swimming pool scheme for B.C., comprising the conversion of an old mill into changing and ancillary accommodation, the formation of a car park and the erection of fences and barriers, etc.—H. J. Amies and Sons (Builders), Ltd., Melbourne Street, Wolverhampton, £14,796. S. N. Shrimpton and Son, architects, 54 Broad Street, Ludlow, and J. Kirkham Dale and Son, quantity surveyors, Kings Court, 117 Colmore Row, Birmingham, 3.

Mansfield, Notts.—Erection of a single-unit timber-built factory at Southwell Road West for Foister, Clay and Ward, Ltd. D. A. Matthews, architect, Leicester. Main contractors—Messrs. Stuart, Nottingham; supply of timber units—Vic Hallam, Ltd., Nottingham. Estimated cost £100,000. Work just commenced.

March, Cambs.—Rebuilding of Baptist church for the Trustees. Main contractor—C. J. and G. H. Taylor, Ltd., Station Road,

March; laminated timber arch beams—Newsum, Sons and Co., Ltd., 238 High Street, Lincoln. J. E. Mitchell, architect, 15 Dartford Road, March, and C. E. Smart and Partners, quantity surveyors, Market Place Chambers, Peterborough.

Middlesbrough, Yorks.—Erection of Government offices in Linthorpe Road—F. Shepherd and Sons, Ltd., Richmond, Yorks., £160,000.

Pembrokeshire.—Erection of dining hall and scullery at Neyland C.P. School, for C.C. Mildred and Howells, quantity surveyors, 22 High Street, Swansea—G. V. Williams and Son, 40 Bridge Street, Haverfordwest, £14,241 (accepted); Frank Batty and Smith, £18,500; Hadsphalitic Construction Co., £16,297; G. Argent and Co., £15,998; R. E. Richards, £15,249; Western Plasterers, Ltd., £15,100; Phelps and Owens, Ltd., £14,622.

Peterlee, Dur.—Erection of a Roman Catholic junior school at Westway. D. Brown, architect, Lambton House, Lambton Road, Newcastle upon Tyne—G. Durham and Co., Ltd. East Boldon, Dur.

Pontypridd, Glam.—Extensions to the Glamorgan College of Advanced Technology at Treforest for C.C. E. A. E. Evans, county architect—J. Gerrard and Sons, Ltd., Swinton, Lancs. Estimated cost £230,000.

Portland, Dorset.—Erection of 22 precast concrete garages on the Verne Common estate for U.D.C.—Marley Concrete, Ltd., Hatchpond Road, Waterloo, Poole, Dorset, £1,976 (accepted); Messrs. Bathcrete, £2,048; Bath and Portland Stones Firms, Ltd., £2,440; Bell and Webster, Ltd., £3,167; Portable Concrete Buildings, Ltd., £2,058; Woolaway Construction, Ltd., £1,505.

Poulton-le-Fylde, Lancs.—Erection of a factory off Garstang Road East for Albert Windsor and Co., Ltd. J. Gregson and Son, Oxford Square, Blackpool. Estimated cost £60,000. England and England architects, 21 St. Annes Road West, Lytham St. Annes, and W. S. Horsfall, quantity surveyor, Barclays Bank Chambers, 2 Birley Street, Blackpool.

Queensbury and Shelf, Yorks.—Erection of a pavilion at Shelf Hall Park for U.D.C. J. F. Hall, engineer and surveyor—E. Chapman, 5 Scarlet Heights, Queensbury (all trades except painting, etc.), £3,080; W. L. Wells, 806 Little Horton Lane, Bradford, 5, painting, etc., £80.

Reading, Berks.—Following for B.C.: Internal redecoration at Reading School—R. Merrick Burrell and Partners, Ltd., Shinfield, Reading, £1,034; construction of swimming pool at Geoffrey Field Primary School—Keil and Vevers, Ltd., Frimley Road Camberley, Surrey, £2,599 (recommended).

Rickmansworth, Herts.—External painting and incidental repairs to 232 Council houses and 26 garages on the Dugdales, Parrots and Berry Lane housing estates, divided into six contracts of 12, 46, 33, 47, 55 and 39 houses, respectively for U.D.C. F. A. J. Smith, engineer and surveyor—(Contract 1) David Lesley (Contractors), Ltd., 20 Tithebarn Street, Liverpool, 2; (2) E. R. Nunn and Co., 55 Sotheron Road, Watford; (3) D. Barton, 23 Gledwood, Hayes, Middx.; (4) and (6) Griffin Bros., 256 Tokyngham Avenue, Wembley, Middx.; (5) McNicholl and Partners, 41 Oakfield, Rickmansworth. Work commenced.

St. Marylebone.—Erection of flats and a basement garage at 33-43 Bryanston Square, London, W.1—F. G. Minter, Ltd., 4 Buckingham Gate, London, S.W.1, estimated cost £900,000. Sir A. E. Richardson and Houfe, architects, 24 Queen Anne Street, London, W.1; R. Travers Morgan and Partners, reinforced concrete consultants, 60 Aldermanbury, E.C.2; Fleetwood Buss and Anns, quantity surveyors, 4 Verulam Buildings, W.C.1. Work commenced.

Sheffield.—Erection of a Methodist church hall at Ben Lane, Wadsley—W. Firth, Ltd., Armthorpe Road, Doncaster. Estimated cost £7,500. Work commenced.

Sheffield.—Preliminary work for fire station at Mansfield Road, involving site clearance and erection of a retaining wall for the Fire Brigades Committee—W. Drabble and Sons, 32 High Street, Mosborough, Sheffield.

Southend-on-Sea, Essex.—Construction of foundations and erection of prefabricated movable classrooms and works incidental thereto at Southchurch High School for Boys for B.C. P. F. Burridge, borough architect—E. G. and L. E. Hubbard, Ltd., 57a Christchurch Road, Southend-on-Sea, £3,220. Work just commenced.

Tyldesley, Lancs.—External painting of 48 houses on the Mosley Common estate for

U.D.C.—J. Dyson, 20 Whitelake Avenue, Flixton, Manchester, £420.

Wallsend, Northumb.—Conversion of the Lyric Cinema, Tynemouth Road, into retail shop premises, warehouse and meeting hall for the Willington Quay and Howdon Co-operative Society. Plans by the C.W.S. Architects' Department, 90 Westmorland Road, Newcastle upon Tyne—C.W.S. Building Department, Benton Road, Newcastle upon Tyne.

Walthamstow, Essex.—Repairs and improvements at 1 Addison Road for B.C.—Direct Labour, £2,454 (recommended, subject to Ministry approval).

Watford, Herts.—Erection of an office block of eight and four storeys (Melton House), on site of 65-67 Clarendon Road—Tersons, Ltd., 4 Dollis Park, London, N.3. Ley, Colbeck and Partners, architects, Palmerston House, 51 Bishopsgate, London, E.C.2, and Pritchard Williams and Hunt, quantity surveyors, 40 Farnival Street, London, E.C.4.

Wigton, Cumb.—Extension to the girls' section of the Friends School, Brookfield. J. Walton Taylor and Son, architects, St. James' Buildings, Gallowgate, Newcastle upon Tyne—G. W. Armstrong, Standingstone, Wigton, £17,000. Work commenced.

ELECTRICAL

Hull.—Electrical installation at a factory and office building on the north side of Hedon Road for City Council. The installation consists of 416 lighting points controlled by 153 switches, 81 switch socket outlets, sanitary incinerators, water heaters, shaver supply unit, battery charger outlet and 41 three-phase outlets. H. F. Alston, town planning officer—John Shaw and Co., Ltd., Vane Street, Hull.

Hull.—Following for City Council. A. Rankine, city architect—Electrical installation to 36 dwellings, Bricknell Avenue estate and Warneford Gardens—J. B. Kilvington, Ltd., 376 Anlaby Road, Hull; electrical installation to 138 dwellings, Nornabell Street—James Todd, 14 Wellington Lane, Hull; electric light and power installation, Rokeby Park County Primary School—A. Lee, 60 Harrow Street, Hull; electric light and power installation, Central Transport Office—Booker and Tarran, Ltd., Wright Street, Hull.

Southend-on-Sea, Essex.—Electrical installation in m.i.c.c. cable at St. Barnard's Convent High School for Girls for B.C. P. F. Burridge, borough architect—Davenant Electrical Co., Ltd., 10 Davenant Street, London, E.1, £5,503.

Wakefield, Yorks.—Installation of landing lights in the council houses for R.D.C.—H. G. Biltcliffe, 34 Church Street, Ossett, £569.

Walthamstow, Essex.—Electrical installations to dwellings on site adjacent to 16-18 Prospect Hill for B.C.—Woodford Electrical Co., 56 High Road, Woodford Bridge, Essex, £1,623 (recommended, subject to Ministry approval).

GAS AND WATER SUPPLY

Braintree and Bocking, Essex.—Codham Mill water scheme, contract 8, for U.D.C., comprising the laying of approximately 54 miles of 9in., 10in., 15in. and 21in. spun-iron pipes, with flexible joints, and the construction of ancillary works. Herbert Lapworth Partners, consulting engineers, 25 Victoria Street, Westminster, S.W.1—Biggs Wall and Co., Ltd., Cromwell Road, Muswell Hill, London, N.10, £34,538.

Forehoe and Henstead, Norfolk.—Construction of Welborne water supply scheme for R.D.C.—A. J. Holloway, Ltd., Norwich Road, Wymondham, £8,084.

Omagh.—Water pipe extensions to Coronation Cottages in Mountjoy East for R.D.C.—Rory Gormley, Sixmilecross, £1,449.

Penistone, Yorks.—Laying of about three-quarters of a mile of 4in. diameter asbestos-cement pipeline along the main road (A.629) through Ingbirchworth, contract B. for R.D.C., consisting of the excavation of trench, laying and jointing asbestos-cement pipes with detachable joints, refilling of trenches and restoring surfaces, together with the fixing of valves in connection therewith, hydrants and necessary chambers, etc. G. H. Hill and Sons (Manchester), civil engineers, 51 Mosley Street, Manchester. 2—Gregory Construction (Y.) Ltd., P.O. Box B35, Wellesley House, Botham Hall Road, Longwood, Huddersfield, £7,670.

Scotland.—Construction of foundations, roof, tailrace, transformer compound and other works for Inverawe power station, Loch Awe project for North of Scotland

Hydro-Electric Board.—The Mitchell Construction Co., Ltd., Peterborough.
Wakefield, Yorks.—Construction of water supply extensions at Woolley Edge for R.D.C.—A. Gregory and Son, Ltd., Leeds Road, Glass Houghton, Castleford, £9,065.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Milford Haven, Pems.—Construction of a jetty on the north shore of the Haven near Fort Hubberton for the Milford Haven Conservancy Board. Posford, Pavry and Partners, consulting engineers, Abbey House, Victoria Street, London, S.W.1.—Peter Lind and Co., Ltd., Romney House, Tufton Street, London, S.W.1. Estimated cost £150,000.

HEATING AND VENTILATING

Croydon, Surrey.—Heating installation in connection with conversion of Coombe Cliffe House into a teachers' centre for B.C.—K. R. Plowright and Co., Ltd., 10 Dingwall Road, Croydon, £2,191 (accepted); C. W. Evans and Sons (London), Ltd., £2,310; E. C. Perry, Ltd., £2,310.

Croydon, Surrey.—Conversion of heating to oil firing at the John Ruskin Grammar School for Boys for B.C.—K. R. Plowright and Co., Ltd., 10 Dingwall Road, Croydon, £2,904 (accepted); C. W. Evans and Sons (London), Ltd., £2,967; E. C. Perry Ltd., £3,020; Freeman Heating Co., Ltd., £3,070.

Cumberland.—Installation of boilers at Highfield House, Wigton, for C.C.—Rowells, Ltd., Byron Street, Newcastle upon Tyne, £7,169.

Hull.—Following for City Council. A. Rankine, city architect: Central heating installation at Chiltern Street School—T. W. Hoyes, 432 Beverley Road, Hull; low pressure hot water heating unit and domestic hot water supply installation, Rokeby Park County Primary School—E. G. Hill and Co., Ltd., rear 22 Lambert Street, Hull.

HOUSING SCHEMES

Andover, Hants.—Twelve old people's bungalows on former allotment land at The Drove for B.C.—N. G. Piper, Ltd., Highlands Road, Andover, £15,573 (accepted). Sturgess Bros., £15,641; Eades Bros., £16,586; Messrs. Swattons, £19,193. Work commencing mid-September.

Ashford, Kent.—Between 140 and 150 houses and bungalows on part of Oak Farm and the Bockhanger estate, off Park Road, Kennington. V. C. Jamieson, architect. Haywoods Heath, Sussex—B. Sired and

Co., Ltd., Hookwood Hall, East Surrey. (Scheme in course of preparation.)

Calne and Chippenham, Wilts.—Sixteen houses and a block of 12 flats at Prospect, Corsham, for R.D.C.—T. F. Brain and Co., Ltd., Bath, £46,609.

Charing, Kent.—Forty bungalows and houses at The Moat. V. C. Jamieson, architect. Haywoods Heath, Sussex—C. L. G. Morgan, Ltd., 139a Brighton Road, Coulsdon, Surrey. Work recently commenced.

Cwmaman, Carms.—Twenty one-bedroom dwellings for old people, two pairs single-storey and four blocks of two-storey units on the Half-moon site at Garnant for U.D.C. W. S. P. Cottrell, architect, 8 Quay Street—T. E. Edwards, Glanrhyd, Glynhir Road, Llandeby, Ammanford, £27,094. Work commencing Oct. 3.

Dungannon, Tyrone.—Forty-four houses at Caledon for R.D.C.—Lees and Stewart, Ltd., Queen Street, Magherafelt, £65,207.

East Ham, Essex.—Sixteen flats and three garages at Ascot Lodge and Charnwood sites for B.C.—Direct Labour, £31,869.

Frome, Som.—Eighteen dwellings at Rockabella Lane, Rode, for R.D.C.—S. W. Foster, Ltd., Coombend, Radstock, £35,574 (subject to Ministry approval).

Hemel Hempstead, Herts.—Fifteen houses and 20 garages at Wheeler Lane for B.C.—Kelray (Builders) Ltd., £44,867.

Hull.—Following for City Council: One hundred and thirty-two dwellings and 40 garages, Boothferry estate—T. Wright and Son (Hull), Ltd., 57 Regent Street, Hull; 157 dwellings and 48 garages at Boothferry estate—E. Barker, Ltd., Hedon Road, Marfleet, Hull; 132 dwellings and 40 garages at Boothferry estate—T. Wright and Son (Hull), Ltd.

Ince-in-Makerfield, Lancs.—Erection of flats at Ince Central School site for U.D.C.—Middleton and Co. (Contractors), Ltd., Blackpool, £25,576 (subject to Ministry approval).

Kingsclere and Whitchurch, Hants.—Two pairs of bungalows, including site and drainage works, etc., at housing site 5, Breachfield, Burghclere, for R.D.C. Henshaw and Cheek, architects, Chantry House, 1 West Street, Andover—Eades Bros., Ltd., Charlton, near Andover, Hants, £4,476.

Ramsgate, Kent.—Twenty maisonnettes, comprising stage I of Newcastle Hill redevelopment for B.C.—S. C. Ward, Ltd., 37a Newington Road, Ramsgate, £43,228 (recommended).

St. Neots, Hunts.—Construction of dwellings and site works at Shirdley House estate extension, No. 1 scheme for

U.D.C.—F. J. and T. F. Prime, £35,364 (subject to Ministry approval).

Sedgfield, Dur.—Thirty-four houses at West Cornforth and six bungalows at Ullswater and Windermere Roads, Ferryhill for R.D.C.—Direct Labour. Estimated cost £50,536 and £7,347, respectively.

Tenterden, Kent.—One hundred and forty houses and bungalows at Mill Farm estate. V. C. Jamieson, architect. Haywoods Heath, Sussex—C. L. G. Morgan, Ltd., 139a Brighton Road, Coulsdon, Surrey. (Scheme in course of preparation.)

Wakefield, Yorks.—Fourteen houses and six bungalows at Shalston for R.D.C.—Gibson Bros. (Upton), Ltd., Upton, Pontefract, £30,704 (subject to Ministry approval).

Walthamstow, Essex.—Six flats on site of Lester Villas, Hollywood Way—Hale End Road, for B.C.—J. Hyde and Co., Ltd., £10,934 (recommended, subject to Ministry approval).

Wemyss Bay, Renfrews.—Demolition of Castle Wemyss and erection of 100 flats and 350 bungalows and villas—John Lawrence (Glasgow), Ltd., 137 West Regent Street, Glasgow, C.2.

Wenlock, Salop.—Twelve bungalows at Wrekin View, Madeley, and 14 houses, eight bungalows and lock-up garages at High Street housing site, Coalport, for B.C.—Lewis Bros. (Wednesfield), Ltd., 10 Blackhalve Lane, Wednesfield, £60,584 (subject to Ministry approval).

Whitley Bay, Northumb.—Six bungalows on the Foxhunters' site and at Seaton Sluice for B.C.—E. Roberts, borough engineer—C. F. Thompson and Co., Claremont Road, Whitley Bay, £7,116.

Woking, Surrey.—Fifty-two maisonnettes at Pares Close, Horsell, for U.D.C.: E. P. Wickens and Sons, Ltd., 93 Eastworth Road, Chertsey, Surrey, £106,321.

MATERIALS AND SUPPLIES

Worthing, Sussex.—Supply of 150 dustbins for R.D.C.—Ockendens, Ltd., High Street, Littlehampton, 33s. 6d. each.

PLANT AND MECHANICAL TRANSPORT

Hornsea, Yorks.—Supply of one Karrier Bantam 2 3/4-ton tipping lorry for U.D.C.—Triangle Motor Co. (Hornsea), Ltd., Eastgate, Hornsea, £1,000.

PLAYING FIELDS, PARKS, ETC.

Belfast.—Construction of playing fields at Whitewell, Newtownabbey, for City Council. Donald A. Shanks, education architect—Abraham and Walker, Ltd., Kernan, Portadown, £45,540. Work to commence in October.



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Croydon, Surrey.—Conversion of Old Norwood Golf Course into playing fields for B.C.—Franks Harris Bros., Ltd., 13 Therapia Lane, Beddington, Croydon, £7,903 (accepted); Douglas-Hamilton (Contractors), Ltd., £8,179; George Wimpey and Co., Ltd., £8,389; E. Doe and Sons (Contractors), Ltd., £8,787; Sam Booth, Ltd., £9,490; T. R. Roberts (Builders), Ltd., £10,956; Matthew James and Co., Ltd., £22,540.

Essex.—Preparation and laying out of playing fields and grounds at Hockley County Secondary School for the South-East Divisional Education Executive—Playing Field Construction Co., £1,769.

Falmouth, Corn.—Levelling and preparation of Dracaena playing field for B.C.—E. Thomas and Co., Ltd., Kings Avenue, Falmouth, £5,127 (recommended).

RAILWAY ENGINEERING

British Railways.—Following contracts placed:

Scottish Region:

Extension of examination pits, Leith Central diesel depot—James White (Contractors), Ltd., Edinburgh.

Modernisation of Hanover Street and Dundas Court entrances, Queen Street station, Glasgow—James Crawford and Co., Ltd., Glasgow.

Raising of superstructure, bridges 157 and 158 between Burnside and Kirkhill—James Young (Contractors), Ltd., Glasgow.

London Midland Region:
Patent glazing for new diesel servicing shed at Carlisle marshalling yard—Mellows and Co., Ltd., Bridge Street, Sheffield.

Supply and erection of structural steelwork for new diesel servicing shed at Carlisle marshalling yard—Jesse Tildesley, Ltd., Charles Street, Willenhall, Staffs.

Reconstruction of bridge 13 and construction of footbridge and substructure for shops at Perry Bar station, Birmingham—Tarmac Civil Engineering, Ltd., Eppingham, Wolverhampton.

Patent roof glazing at Motive Power Depot, Kingmoor, Carlisle—W. H. Heywood and Co., Ltd., Ashley Place, London, S.W.1.

Main office, forwarding shed office, weighbridge and weighbridge office at Watford Freight Terminal—Marshall Andrew and Co., Ltd., Queen Anne's Gate, London, S.W.1.

Aluminium structural frame, aluminium panel extrusions and aluminium flashings for prefabricated station buildings—E. C.

Payter and Co., Ltd., Meeting Street, Great Bridge, Tipton, Staffs.

Renewal of coverings to veranda roofs at Manchester Central station—J. Rata and Co., Ltd., Chapter Road, Willesden Green, London, N.W.2.

Reconstruction of bridge 30 on Trent Valley line—Thomas Fletcher and Co., Ltd., Forest Road, Mansfield, Notts.

New boilerhouse at Old Works, Crewe—Edward Wood and Sons, Ltd., Park Street, Derby.

Eastern Region:

Reconstruction of sheet piling at the ends of underline bridge 58 between Branton (Goods) and Saxilby—W. and C. French, Ltd., South Brink, Wisbech, Cambs.

Provision of staff accommodation at east end of new yard at Frodingham—Bernard Pumfrey, Ltd., Wintern Works Lea Road, Gainsborough, Lincs.

Provision of electrical installations at Hertford (East) and Bishop's Stortford—James Scott and Co. (Electrical Engineers), Ltd., 20 Grosvenor Place, London, S.W.1.

Reconstruction of superstructure of underline bridge 449 over High Street between Saxmundham and Darsham—Joseph Westwood and Co., Ltd., Napier Yard, West Ferry Road, Millwall, London, E.14.

Forming of an embankment, construction of subways 1916 and 1917 and strengthening of arches 505 to 509 inclusive of Rectory Road viaduct, between Hackney Downs and Rectory Road—Thomas Fletcher and Co., Ltd., Forest Road, Mansfield.

Cleaning and painting of stations, buildings, structures, bridges, etc., between Broxbourne Junction and Hertford (East) station—W. R. Payne and Sons, Ltd., 5 Idol Lane, London, E.C.3.

Provision of new drainage and a sand blanket and the trimming of the cutting slopes between Newark and Retford (137 miles 1,210yd. to 137 miles 1,606yd.)—Eagre Construction Co., Ltd., East Common Lane, Scunthorpe, Lincs.

Supply, delivery and installation of water softening plant and water storage tank, together with associated equipment at Finsbury Park diesel maintenance depot—William Bobby and Co., Ltd., Rickmansworth, Herts.

Construction of signal box at Colchester—Cibitt and Gotts, Ltd., Station Works, Westerfield, Ipswich.

Repairs to awnings and down platform wall, re-pointing and renovation of brickwork and stonework and replacement of urinals, etc., in lavatories at Barnsley Exchange station—Charles R. Price, Barnsley Road, Doncaster, Yorks.

Remedial measures in connection with slip in embankment at bridge 259 between Barkstone and Hougham—Thomas Fletcher and Co., Ltd., Forest Road, Mansfield, Notts.

ROADS, BRIDGES AND SITE WORKS

Bacup, Lancs.—Following for B.C.: Laying of approximately 2,500 sq. yd. of two-course hot-rolled asphalt at the town centre, 150 sq. yd. of Free-course, bus top, hot-rolled asphalt, and 700 sq. yd. single-course and two-course patching hot-rolled asphalt, all on A.681—Geo. Wimpey and Co., Ltd., Hammersmith Grove, London, W.6. £3,226.

Chorley, Lancs.—Private street works in Highfield Road North for B.C.—G. Catterall and Sons, Ltd., Bolton Road, Adlington, Lancs.

Crawley, Sussex.—Site works at Furnace Green neighbourhood for the Development Corporation. B. Roberts, engineer—Highways Construction, Ltd., Asphalt House, Palace Street, S.W.1. £63,384. Work about to commence.

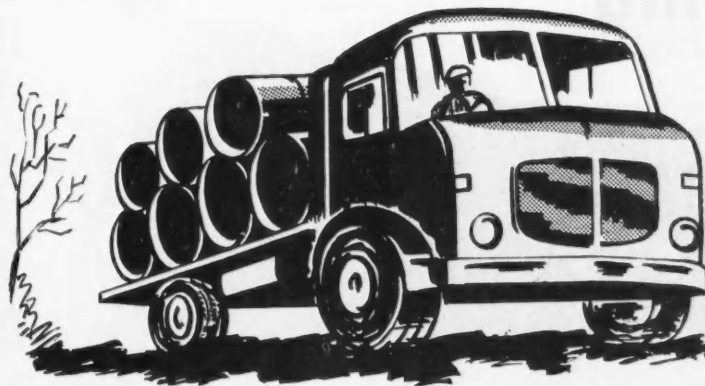
Croydon, Surrey.—Resurfacing of playgrounds at Norbury Manor Infants' School for B.C.—A. C. W. Hobman and Co., Ltd., 21-22 Old Bailey, London, E.C.4. £1,535 (accepted); Allmacadams, Ltd., £1,757; General Asphalt Co., Ltd., £1,808; Chittenden and Simmonds, Ltd., £1,878; William F. Rees, Ltd., £1,934; Constable Hart and Co., Ltd., £2,105; H. Hemmings, Ltd., £2,385.

Darlington, Dur.—Improvements to Salters Lane bridge for B.C. and the British Transport Commission. G. S. Short, borough engineer—Bridgeworks—Cleveland Bridge and Engineering Co., Ltd., Darlington; roads and sewer works—Direct Labour.

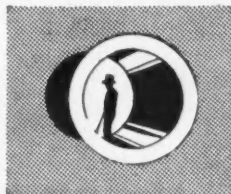
Dundee, Angus.—Spraying and chipping of roadways for Harbour Board—William Briggs and Sons, Ltd., East Camperdown Street, Dundee.

Edzell, Angus.—Site preparation work at United States Naval Air Station for Air Ministry—William Tawse, Ltd., Angusfield, Aberdeen. Estimated cost £50,000.

Gravesend, Kent.—Surfacing drive in tarmac at Ellerslie, Milton Road for



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Young and Young—Hudsons, Ltd., Gravesend.

Hastings, Sussex.—Making-up of Windmill Road for B.C.—Nicholson Construction Co., Ltd., 133 Ebury Street, London, S.W.1, £5,008 (recommended).

High Wycombe, Bucks.—Widening of Manor Road and provision of surface water sewers for B.C.—J. Smith and Son (Walters Ash), Ltd., Walters Ash, near High Wycombe, £14,996 (recommended).

Huddersfield, Yorks.—First-stage road and sewer works at Bank End Lane and Templar Drive, Almondbury, for B.C., comprising approximately 535 lin. yd. of 9in. and 12in. diameter salt-glazed ware pipe sewers, 1,100 lin. yd. of kerb and channel foundations, 2,750 sq. yd. of pitched carriageway foundations, together with concrete manholes, gullies and ancillary works A. L. Percy, borough engineer and surveyor—Isaac Timmins, Ltd., Greenhead Estate, Dalton, Huddersfield.

Lichfield, Staffs.—Reconstruction of the carriageway in Bird Street for City Council—Direct Labour. Work to commence during this month.

Penistone, Yorks.—Repairs of estate road and footpath at Dunford, Oxspring, and Thurgoland for R.D.C.—Benjamin Beever's Sons, Ltd., Ingirchworth, Penistone, near Sheffield, £2,437.

Potters Bar, Middx.—Widening a section of The Walk for a distance of 220 lin. yd. for U.D.C.—E. H. Walden, engineer and surveyor—Balls and Partners, Ltd., Tresillian, Cuffley, £4,396. Work commencing October.

Reading, Berks.—Supply and delivery of a bridge and footwalks for Yield Hall car park for B.C.—Thomas Storey (Engineers), Ltd., Abbey House, Victoria Street, London, S.W.1 £2,010 (recommended).

Richmond, Surrey.—Reconstruction and widening of railway bridge 30 Richmond Station for B.C., comprising the demolition of the existing cast-iron girder and brick jack arch bridge; construction of a new steel and concrete bridge, including piers and abutments; widening and reconstruction of the carriageway and footpaths; and for the necessary accommodation works. G. Stanley Weddle, borough engineer and surveyor—Ruddock and Meigham, Ltd., Burford House, Harrow View, Wealdstone, Middx.

Whitstable, Kent.—Making-up and sewerage of Russell Drive (part of), length 393ft. approximately for U.D.C.—B. E. Hardy, engineer and surveyor—Barton Construction Co., Ltd., Whitstable, £5,101 (accepted, subject to Ministry approval); Bowzell, Ltd., £5,611; Richard Costain, Ltd., £7,093.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Ballymena, Antrim—Galgorm/Gracehill sewerage scheme for R.D.C. McCutcheon and Wilkinson architects, 34 High Street, Ballymena—The Ballymena Construction Co., Ltd., Montague Avenue, Ballymena, £55,799 (accepted).

Forehoe and Henstead, Norfolk.—Construction of the Hethersett and Cringleford sewerage scheme for R.D.C.—F. W. Shanks, Ltd., Hunstanton, £134,414.

Hastings, Sussex.—Reconstruction of sewer at Upper Park Road for B.C.—T.H. Contractors, Ltd., Aylesford, Kent, £16,138 (recommended).

Hemsworth, Yorks.—Kirk Smeaton and Little Smeaton sewerage and sewage disposal scheme, contract 1, for R.D.C., comprising the construction of approximately 4,000 lin. yd. of spun-iron and glazed stoneware pipe sewers of 9in., 7in. and 6in. diameter, and rising mains of 6in. and 5in. diameter, together with concrete tube manholes, a sewage pumping station and sewage disposal works, comprising settlement tank, bacterial filters, humus tanks, sludge drying beds, pumping station and other incidental works. Willcox, Raikes and Marshall, consulting engineers, 33 Great Charles Street, Birmingham, 3—Pridmore and Broadhead, Neale Road, Park Side, Wheatley, Doncaster, £43,675. Work commenced.

Hitchin, Herts.—Sewerage works in the parish of Kimpton for R.D.C., comprising the construction of about 7,300yd. of 12in., 9in. and 6in. stoneware pipe sewers, manholes, ventilators, house connections, etc., and about 100yd. of 7in. spun-iron pumping main, sewage pumping station and a sewage disposal works, including sedimentation tanks, percolating filters, humus tanks, sludge drying beds, sludge top water and effluent pipes, etc., and other appurtenant works. D. Balfour and Sons,

consulting engineers, 131 Victoria Street, S.W.1—Macstrac, Ltd., Canada House, Chepstow Street, Manchester, 1, £98,650 (accepted); P. P. Taylor (Doncaster), Ltd., 107,963; Stutley Bros., Ltd., £99,957; Cooper Bros. (St. Albans), Ltd., £99,451; William Moss and Sons, Ltd., £122,118; C. V. Buchan and Co., Ltd., £171,726; William Press and Son, Ltd., £123,386; Concrete Piling, Ltd., £113,787; H. Osman and Co., £124,513; T.H. Contractors, Ltd., £136,634; J. Murphy and Sons, Ltd., £104,667; Hussey, Egan and Pickmere, Ltd., £155,572; Robert Marriott, Ltd., £106,729; Brooks and Johnson, Ltd., £139,654; Adkins and Shaw, Ltd., £113,356.

Isle of Wight.—Construction of a storage sewer at Bembridge for R.D.C., comprising about 54yd. of 96in. internal diameter precast tubes with an in-situ reinforced concrete penstock chamber. In addition, there will be 12in. diameter connections to the existing sewer, precast concrete manholes, and other incidental works. Lemon and Blizard, consulting engineers, Telford House, Hulse Road, Southampton—Cheek Bros., Ltd., 1 Church Litten, Newport, 1, of W., £11,125 (accepted, subject to Ministry approval); Wall Bros. (Civil Engineers), Ltd., £12,798. Work commencing October.

Newbury, Berks.—Construction of the south-west area drainage scheme for B.C.—Mexfield Building Co., £14,017.

Newton Abbot, Devon.—Relaying of main sewer in Courtenay Street and Queen Street for U.D.C.—Devon Contractors, Ltd., Venny Bridge, Whipton, Exeter, £39,661.

North Cotswold, Glos.—Laying of approximately 2,000yd. of 6in. sewer and the construction of a sewage pumping station, rising main and treatment works for the village of Naunton for R.D.C. John H. Haiste and Partners, consulting engineers, 8-10 Southgate Street, Gloucester—Hadsphalitic Construction Co., Ltd., Chippenham (subject to Ministry approval).

Rickmansworth, Herts.—Uxbridge Road rising main comprised of 101 lin. yd. of 9in. sewer and 443 lin. yd. of 6in. spun-iron rising main, manholes and hatchbox chamber for U.D.C.—J. Bray, 76 Houseland Road, Mottingham, London, S.E.9, £4,131.

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Spilshy, Lines.—Construction of sewers, pumping station and sewage disposal works at Anderby Creek for R.D.C. G. F. Taylor, engineer and surveyor—Hammond and Co., Mablethorpe, £38,192. Work commencing October.

STREET LIGHTING

Aldridge, Staffs.—Following, for U.D.C.: (1) Erection only of 12 group A reinforced concrete lighting columns; 44 group B reinforced concrete lighting columns, and the supply and erection of 12 140-W sodium lanterns and gear; 19 60-W sodium lanterns and gear, and 25 100-W tungsten filament lamps and lanterns; (2) erection only of 43 group B reinforced concrete lighting columns, and the supply and erection of 35 60-W sodium lanterns and gear, and eight 100-W tungsten lamps and lanterns. J. Maden, engineer and surveyor—Cohen Bros. (Electrical), Ltd., Bury Old Road, Manchester, £1,605 (accepted); Walker Installations, Ltd., £1,635; Gallagher and O'Brien Enterprises, Ltd., £1,636; A.E.I. Lamp and Lighting Co., £1,658; Abacus Engineering, Ltd., £1,697; G.E.C., Ltd., £1,698; Bagshaw Contractors, Ltd., £1,718; Atlas Lighting Co., Ltd., £1,718; Revo Electric, Ltd., £1,731; S. A. Unston, Ltd., £2,030.

Dorking, Surrey.—Provision of sodium group A street lighting in Reigate Road from Pixham Lane to London Road, London Road (Pippbrook Garage to High Street) and Westcott Road (Station Road to Sondes Place Drive) for U.D.C.—O. C. Summers, Ltd., 111 York Way, London, N.7, £3,682.

Farnworth, Lancs.—Following for B.C.: Improvement to street lighting equipment in Albert Road, Worsley Road and Market Street—Concrete Utilities, Ltd., Manchester.

Conversion of street lighting on bus routes in Harper Green and Highfield Road areas to sodium lighting—General Electric Co., Ltd., Magnet House, London, W.C.2.

GOVERNMENT CONTRACTS

Air Ministry.—Contracts to the value of £4,000 or over for the week ended Aug. 19:

Building work: Brighton, Yorks—P. J. Parrott and Co., Ltd., Main Street, Methley, Leeds; London Airport, Middx.—John Cochrane and Sons, Ltd., Poyle Road, Colnbrook, Bucks.; Hereford—John Laing and Son, Ltd., 39-43 College Green, Bristol; Coltishall, Norfolk—R. G. Carter, Ltd., Drayton, Norwich; Abingdon,

Berks.—E. S. Gates, Ltd., Chalfont Station Road, Amersham, Bucks.; Woolfox Lodge, Rutland—E. Clarke and Sons, High Fields, Salford Road, Melton Mowbray.

Resurfacing runway: Aldergrove, Northern Ireland—The Limmer and Trinidad Lake Asphalt Co., Ltd., 58 Howard Street, Belfast, Northern Ireland.

Artificers' work: Hack Green, Ches.—A. E. Davies and Sons (Builders), Ltd., 53 Court Road, Wrexham.

Painting work: Hurn Airport, Hants—Geo. Jones and Son (Contractors), Ltd., 27b Kensington Church Street, London, W.8; Halton, Bucks.—Abbott of Harrow Ltd., Sherbourne House, 23-28 Northolt Road, Harrow, Middx.; Chessington and Healdy Court, Surrey—Deeds (Hounslow) Ltd., 173 Staines Road, Hounslow, Middx.; Mildenhall, Bury St. Edmunds, Suffolk—Fields, Ltd., 12 Kew Road, Richmond, Surrey.

Central heating station auxiliary equipment and external h.p.h.w. mains: London Airport, Middx.—Rosser and Russell, Ltd., Queens Wharf, Queen Caroline Street, Hammersmith, London, W.6.

Re-covering of buildings: Wyton, Hunts Bitumen Associates (Egham), Ltd., Australia Road, Slough, Bucks.

Metropolitan Police.—Recent contracts placed include:

External and internal repainting of police boxes, K Division—J. Stokes and Sons (Builders), Ltd., £628.

External painting and repairs Hendon estate—F. Troy and Co., Ltd., £8,449.

Ministry of Finance, Northern Ireland.—Contracts exceeding £250 in value placed during the period Aug. 8 to Aug. 19, inclusive:

External painting: P.M.'s residence, Stormont—McBurney and Cowan, 144 Donegall Pass, Belfast, 7.

Low pressure hot water heating, etc.: R.U.C. Depot, Enniskillen—Musgrave and Co., Ltd., St. Ann's Works, Belfast, 5.

Periodical—supply, etc., protective clothing: Government Establishments in Northern Ireland—G. MacLellan and Co., Ltd., 60b North Queen Street, Belfast, 5.

Periodical—supply, etc., industrial footwear: Government Establishments in Northern Ireland—(a) W. J. Nelson and Co., Ltd., 21 Clifton Street, Belfast, 13, (b) Gilpins, 3 Wilson's Court, High Street, Belfast, 1.

Supply, etc., fencing and gates: Narrow Water Castle, County Down—N. Cameron and Co., Ltd., 8 College Square North, Belfast, 1.

Re-erection and completion of U.S.C. Drill Hall: Dundrum, County Down—J. McClune, Main Street, Dundrum, County Down.

Electrical installation: new office building, Omagh—The Rotary Electric Co., Ltd., 58 Waring Street, Belfast, 1.

Electrical installation: new Government Offices, Stormont—J. Kilpatrick and Son, Ltd., 75 Great Victoria Street, Belfast, 2.

Post Office.—Contracts for duct laying, etc., works to the value of £4,000 and over placed during the week ended Aug. 20:

J. E. Billings and Co., Ltd., 54 Beddington Road, Croydon, Surrey; W. A. Gale, Ltd., 48 Ruthven Road, Litherland, Liverpool, 21; J. Murphy and Sons, Ltd., 43 Charteris Road, Finsbury Park, L. N.4; The Norwest Construction Co., Ltd., Litherland, Liverpool, 21; D. J. v Sullivan (Bristol), Ltd., 16 Burlington Road, Redland, Bristol, 6; Alexander Thomson and Co., (London), Ltd., 45a Kensington High Street, London, W.8.

War Department.—Contracts placed for the week ended Aug. 12:

Anglesey (Tycroes Camp): building—Watkin Jones and Sons, Ltd., Bangor.

Cumberland (Longtown): painting and decorating—Reid Bros. Carlisle; roadwork—Harbour and General Works, Ltd., London.

Hampshire (Cove): hutting—W. R. Oldham, Ltd., London.

Somerset (Taunton): decorating—T. H. Kenyon and Sons, Ltd., London.

Warwickshire (Long Marston): re-sheeting shed roofs—Mansfield Sheet Co., Ltd., Mansfield.

Wiltshire (Little Cheverell): building—Wain Bros. (Contractors), Ltd., Stratton St. Margaret; (Larkhill): roadwork—Constable Hart and Co., Ltd., Portsmouth.

Contracts placed for the week ended Aug. 19:

Devon (Plymouth): miscellaneous—John Garrett and Son, Ltd., Plymouth.

Dorset (Lulworth Cove): roadwork—The Limmer and Trinidad Lake Asphalt Co., Ltd., Poole.

Essex (Colchester): kitchen equipment—James Stott and Co. (Engineers), Ltd., Oldham.

Hampshire (Tidworth): painting and decorating—C. A. Hayes and Sons (Painting), Ltd., Bristol; (Aldershot): building—Lee Bros. (Aldershot), Ltd., Aldershot.


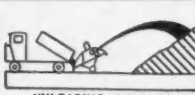




Lancashire (Liverpool): painting and decorating—Hardwicks, Ltd., Manchester.


Oxfordshire (Bicester): building—Bosworth and Wakeford, Ltd., Rugby.

Stirlingshire (Stirling): electrical—Sturrock Power Installations, Ltd., Dundee.

Surrey (Brookwood): building—Sherfields (Farnham), Ltd., Farnham.

Wiltshire (Warminster): roadwork—O. J. Elliott and Co., Ltd., Bristol.



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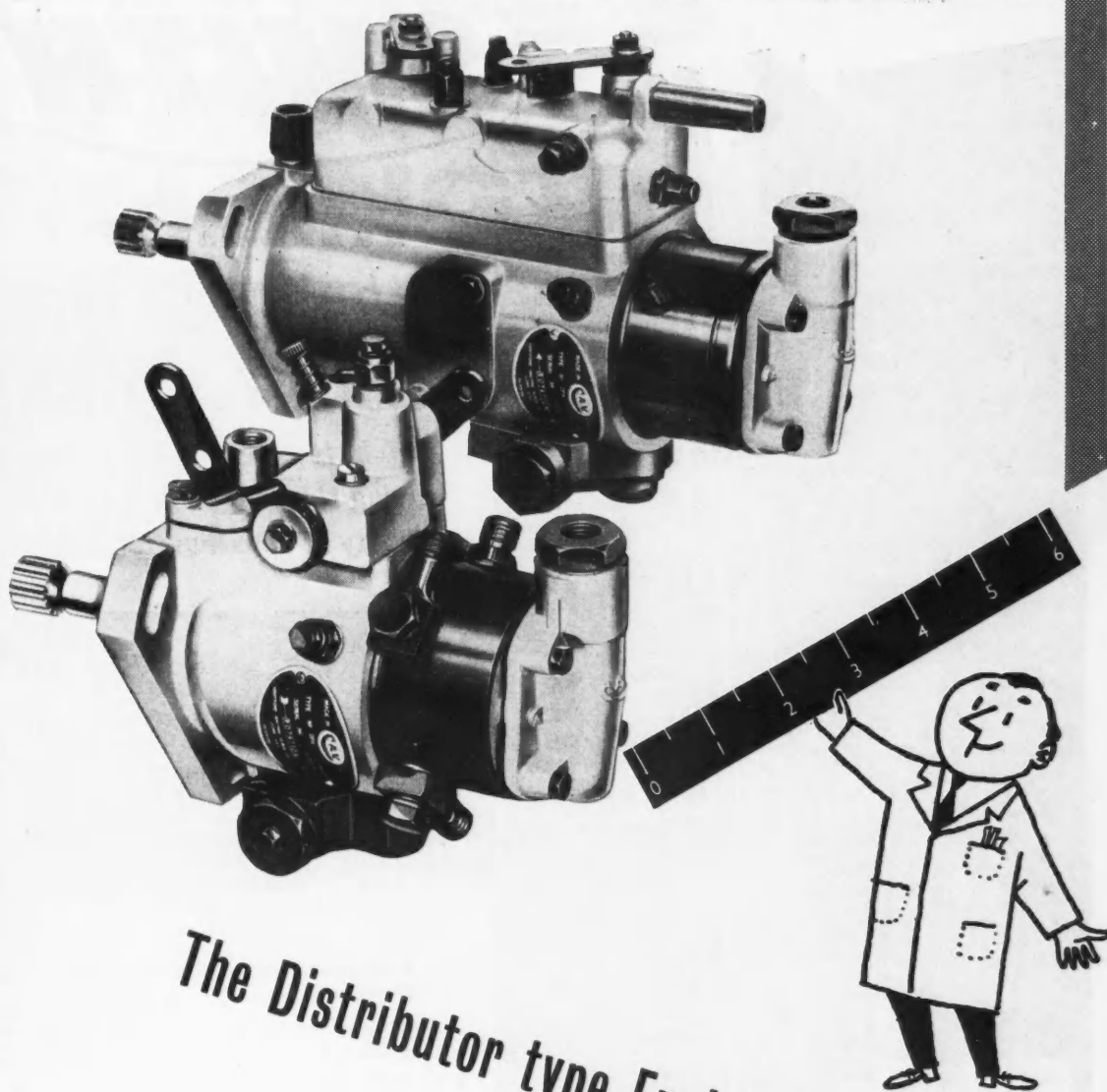
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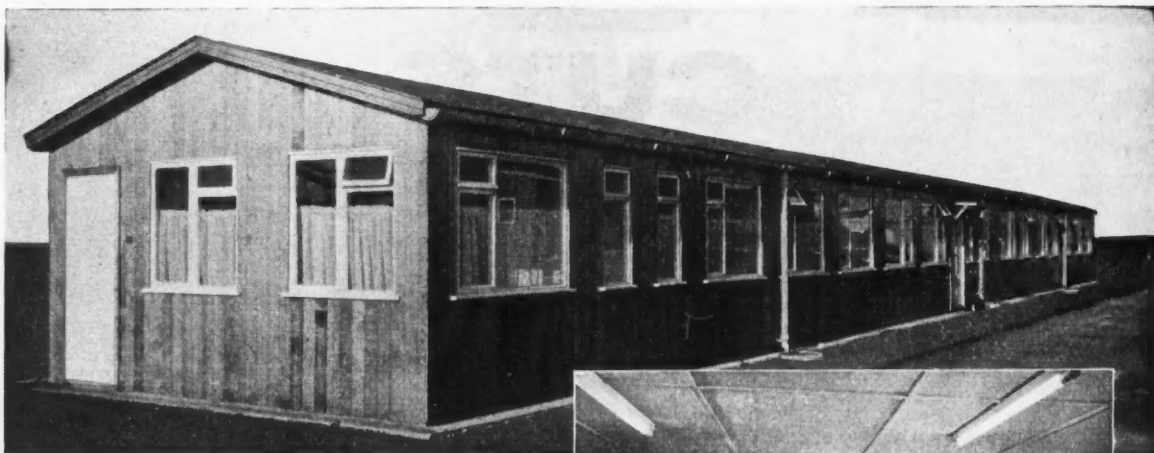
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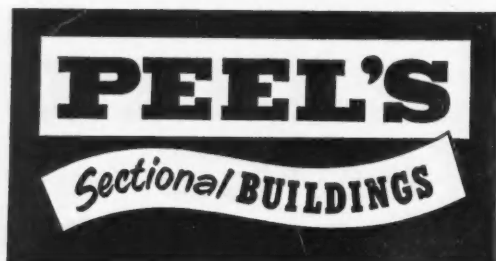
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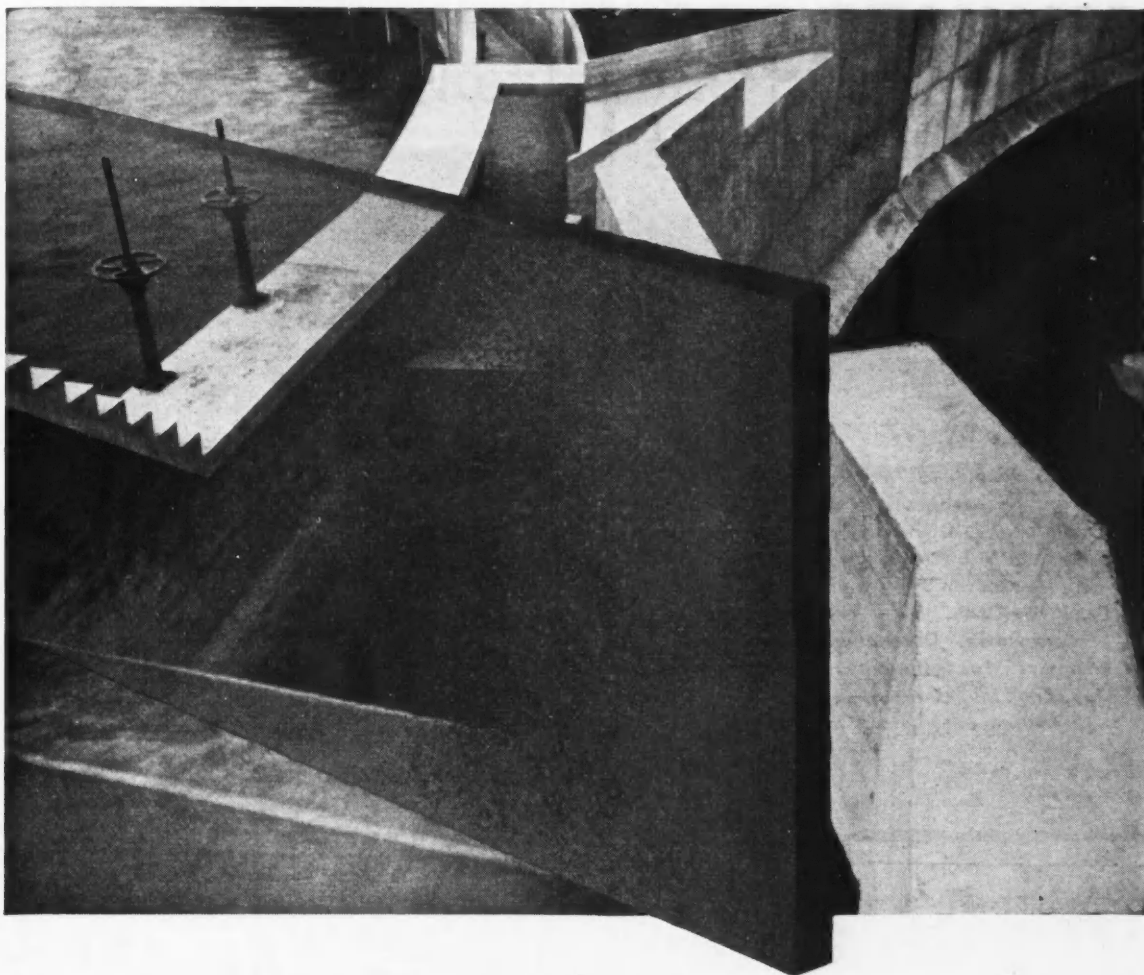


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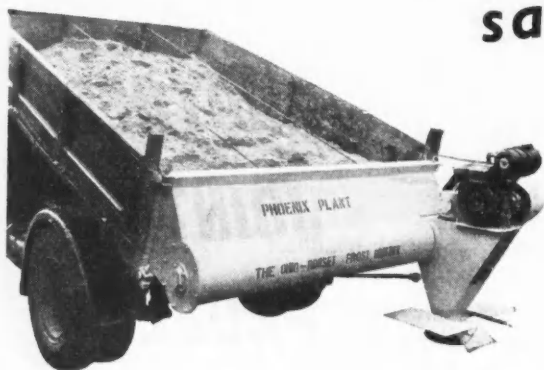
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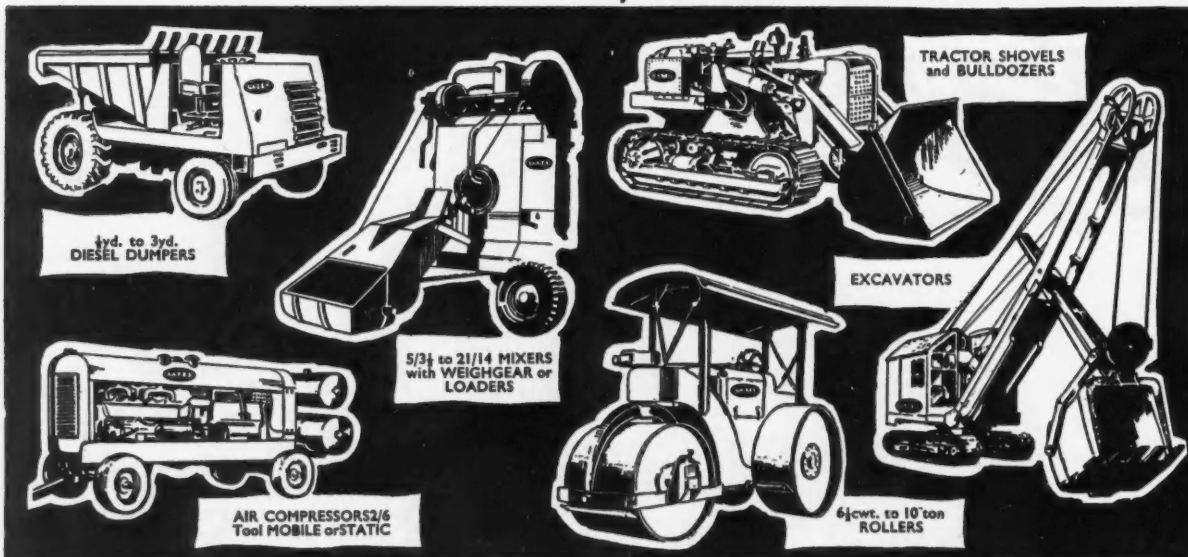
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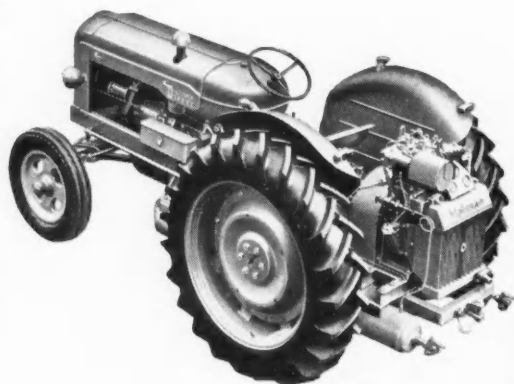
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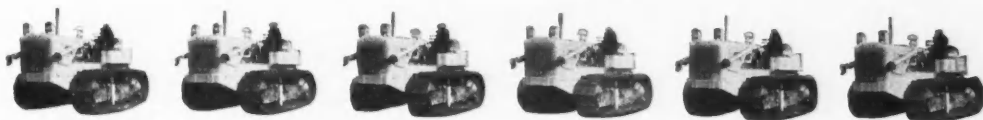
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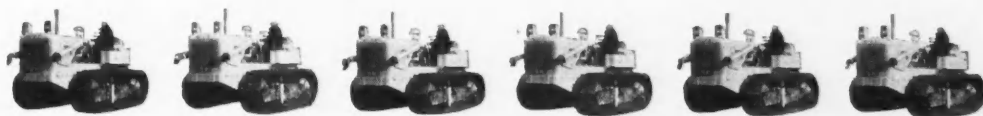
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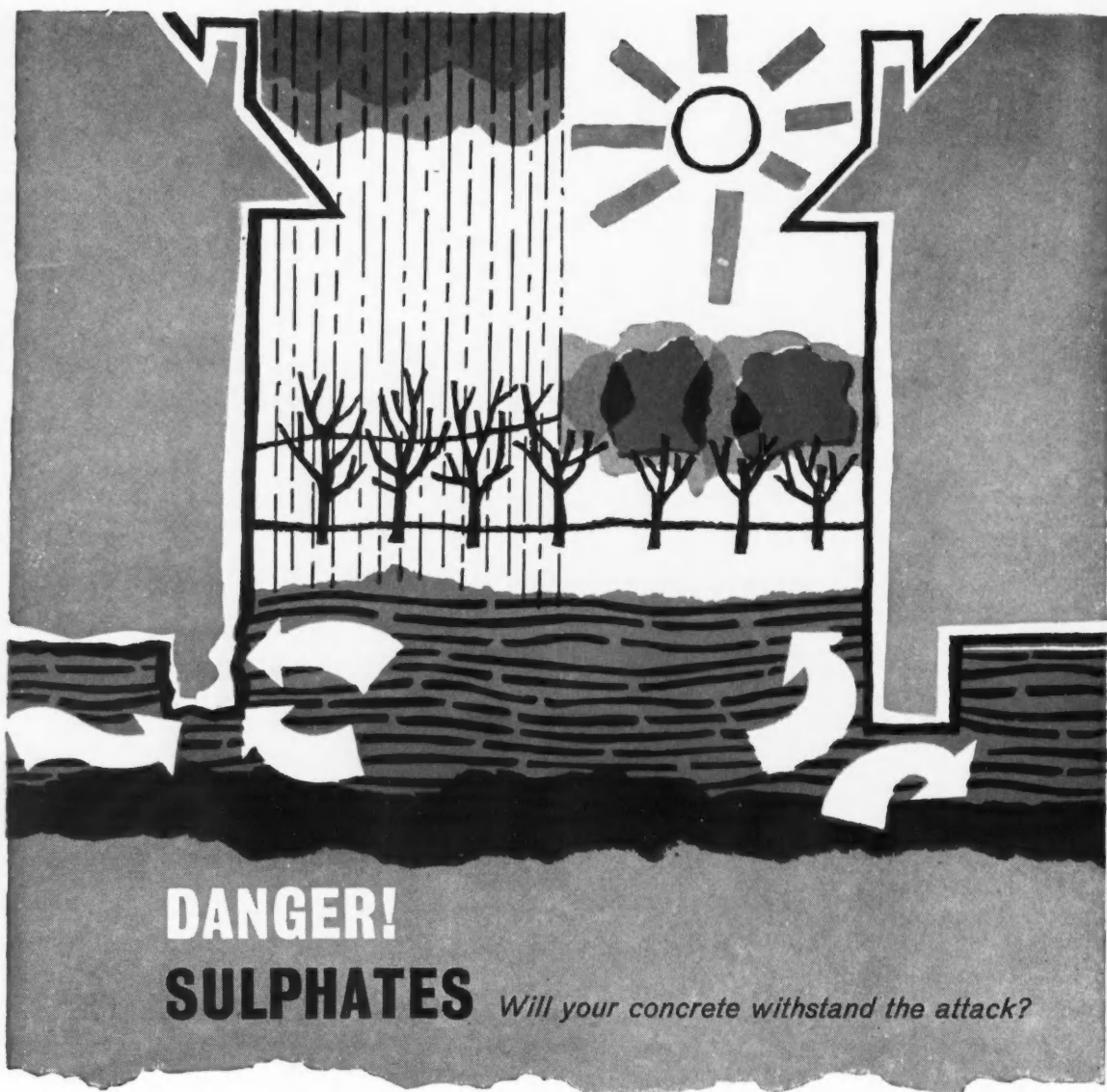
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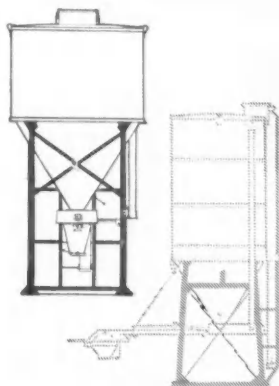
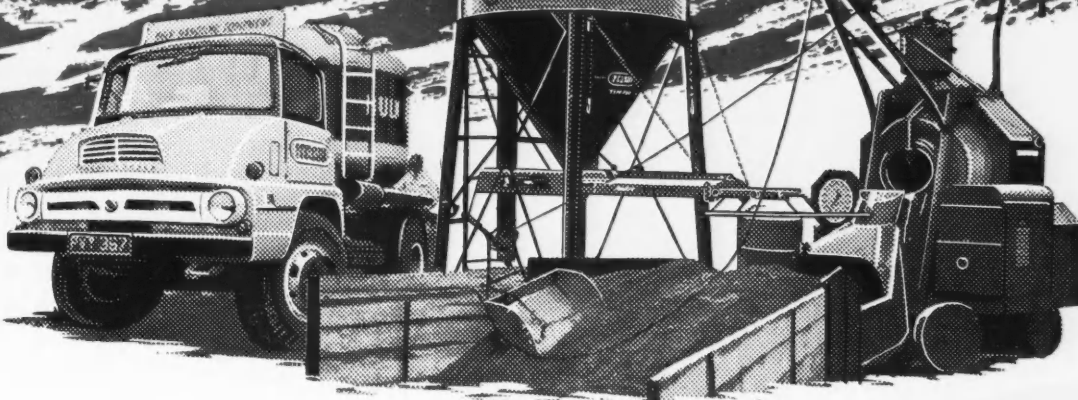
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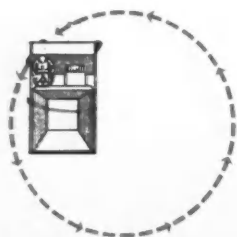
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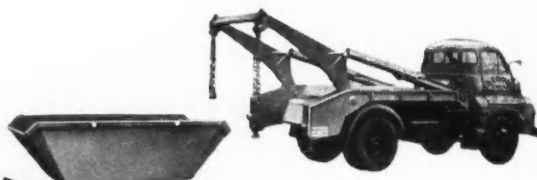


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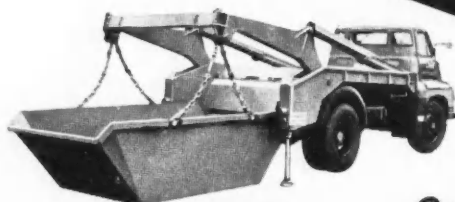


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(Continued from page 1000)

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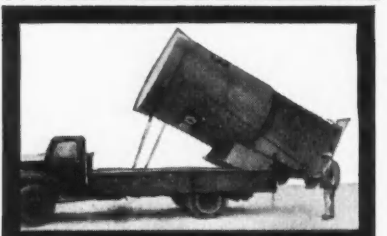
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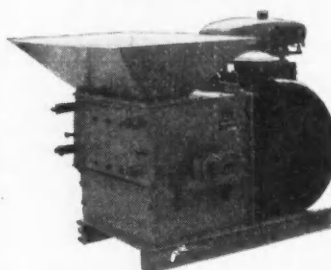
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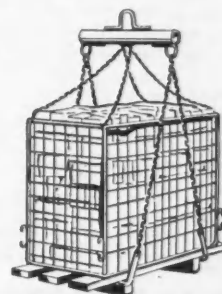
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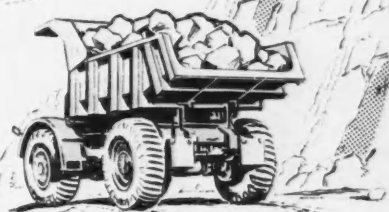
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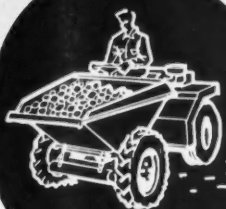
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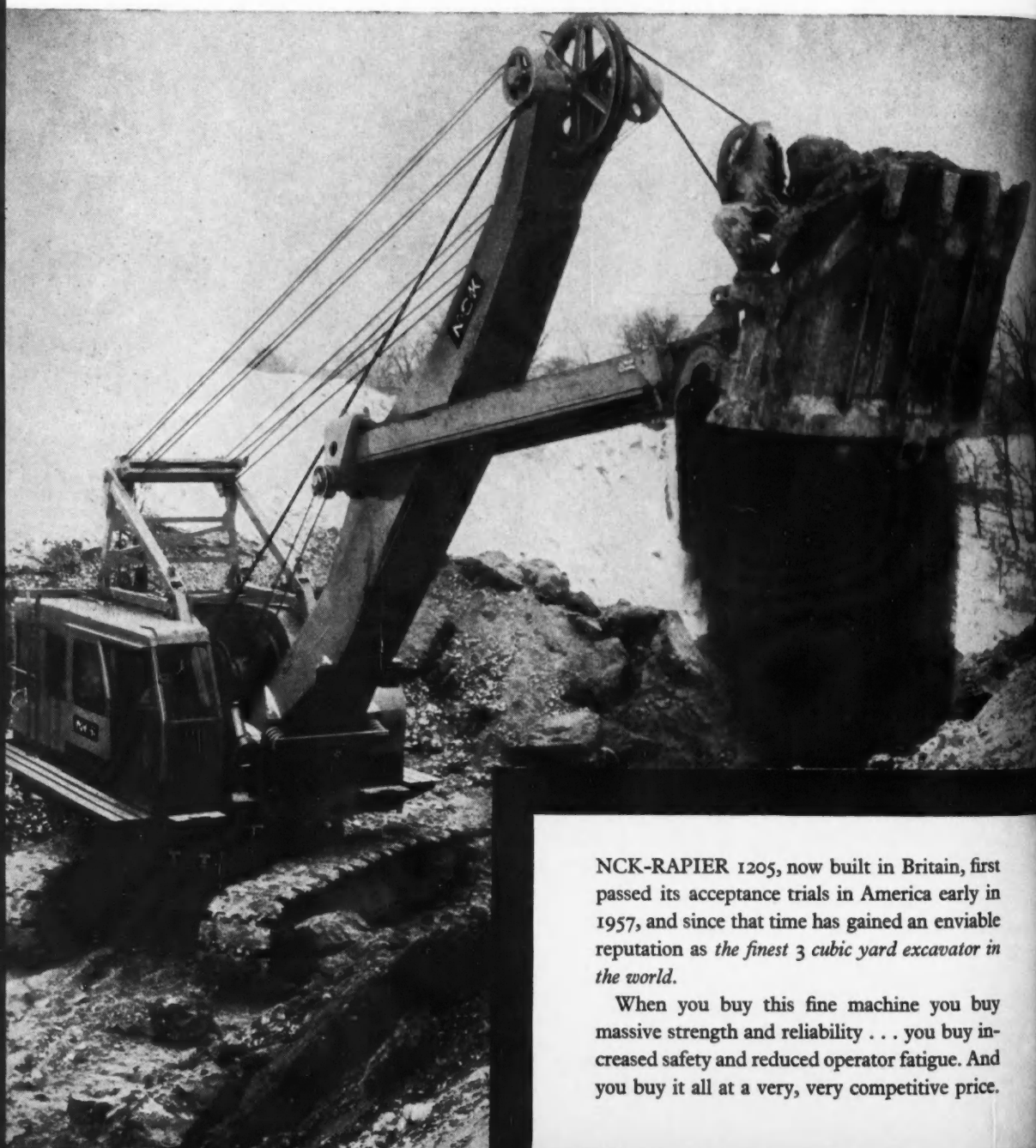
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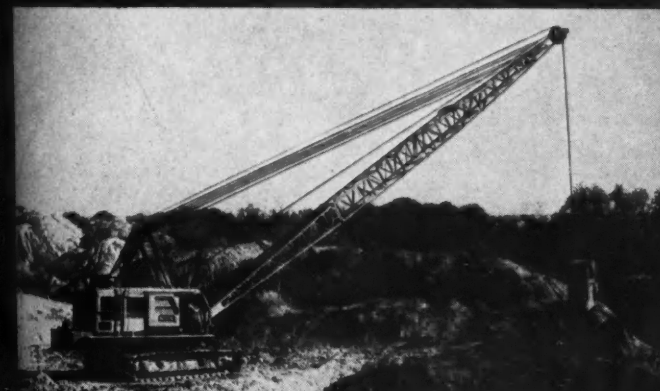
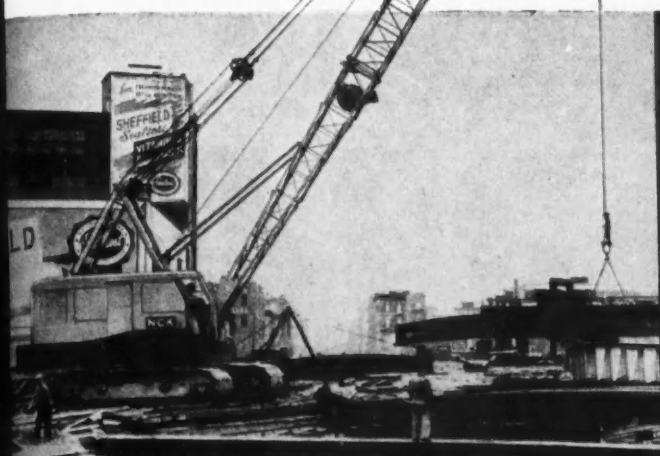
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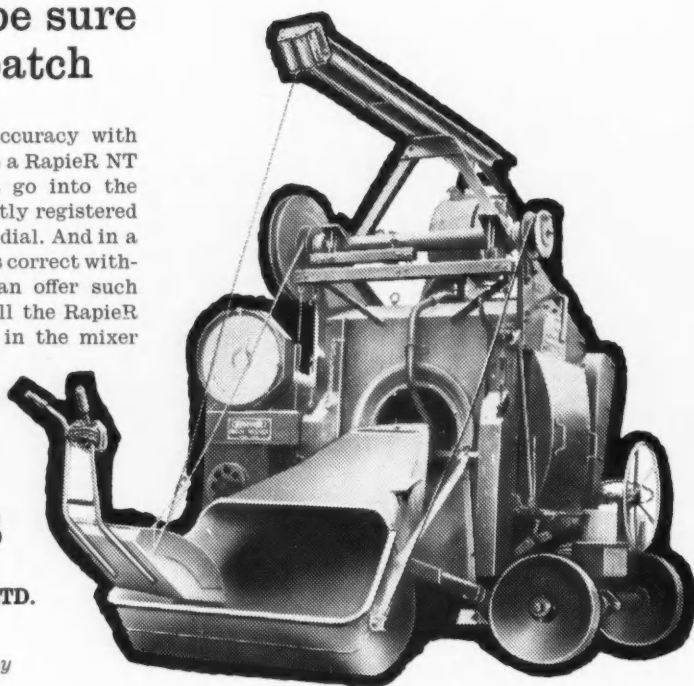
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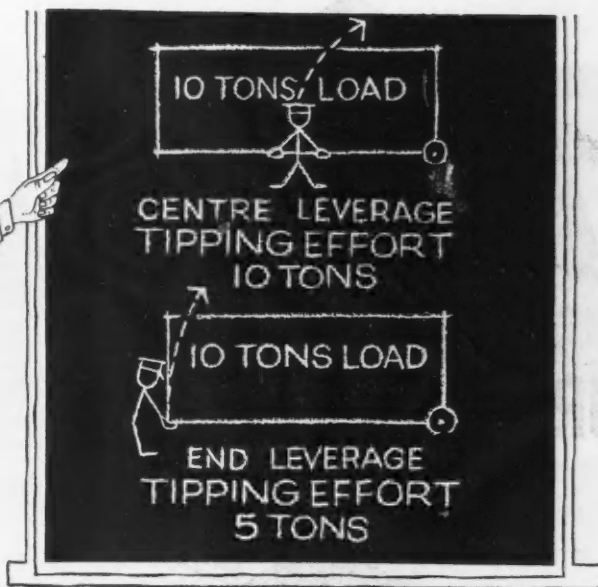
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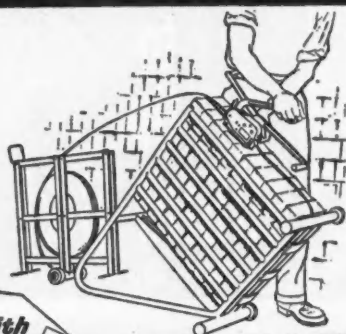


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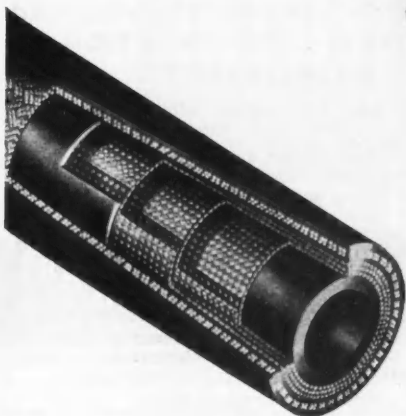
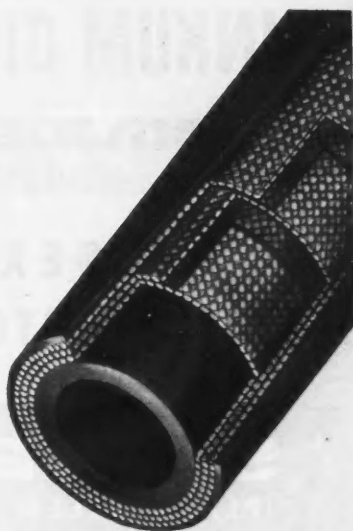
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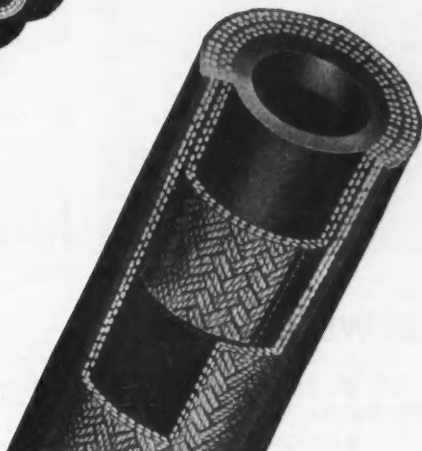
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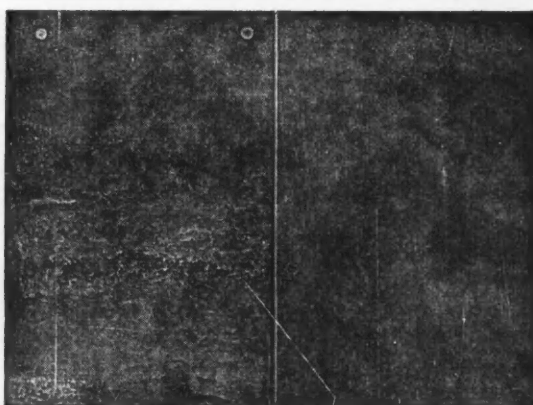
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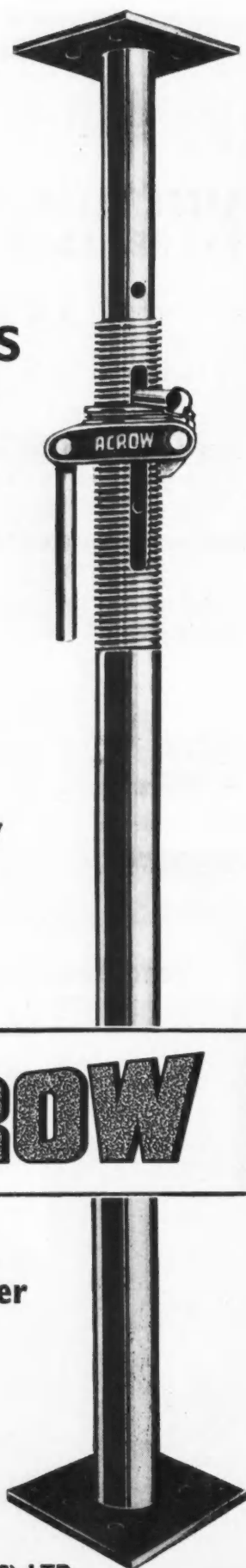
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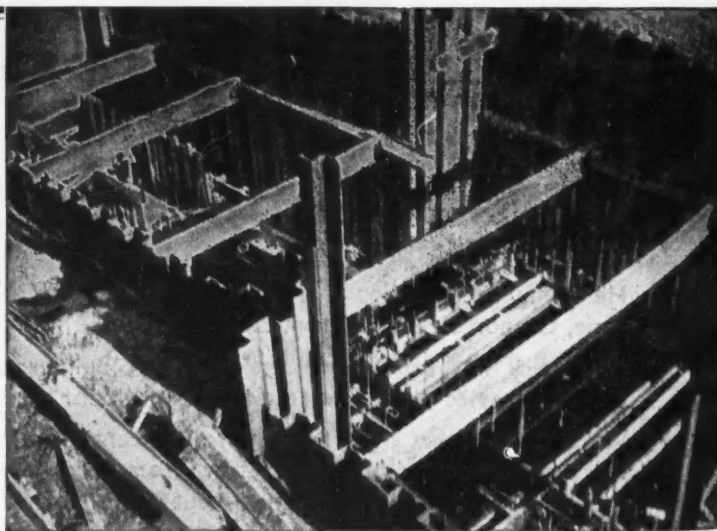
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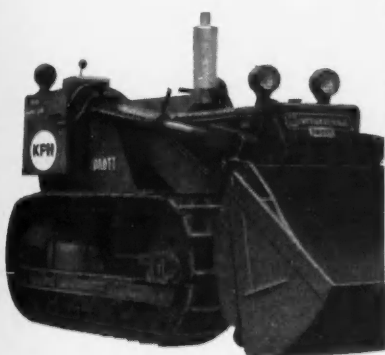
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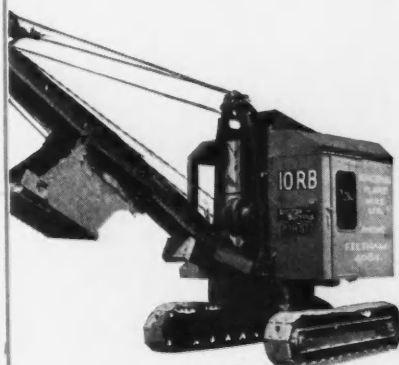


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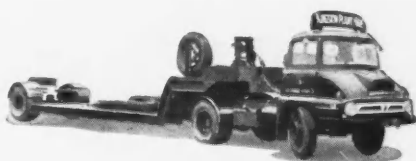
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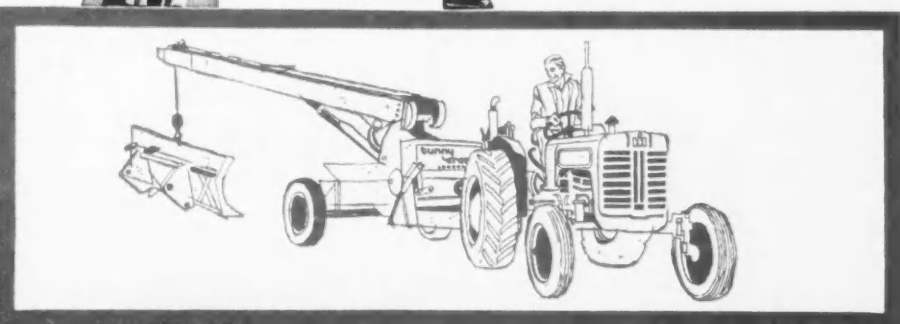
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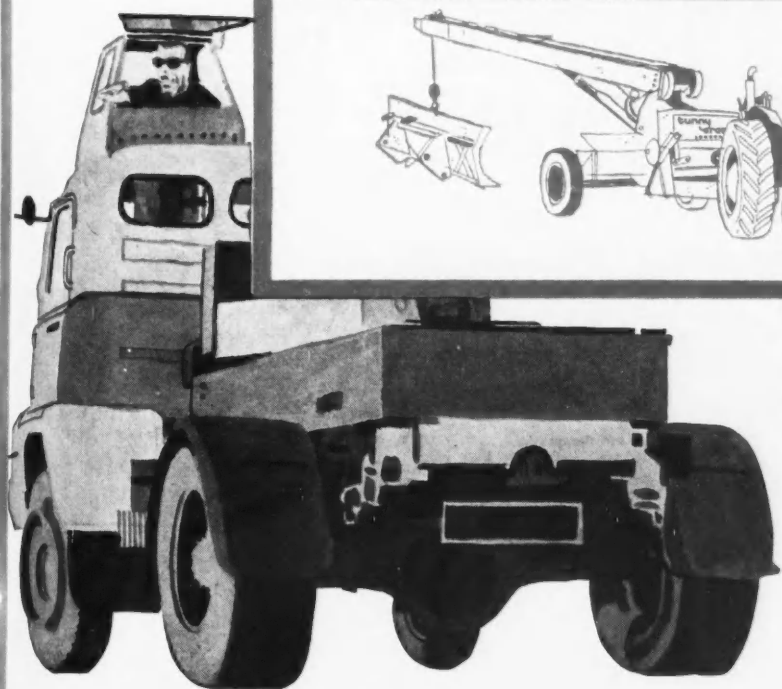
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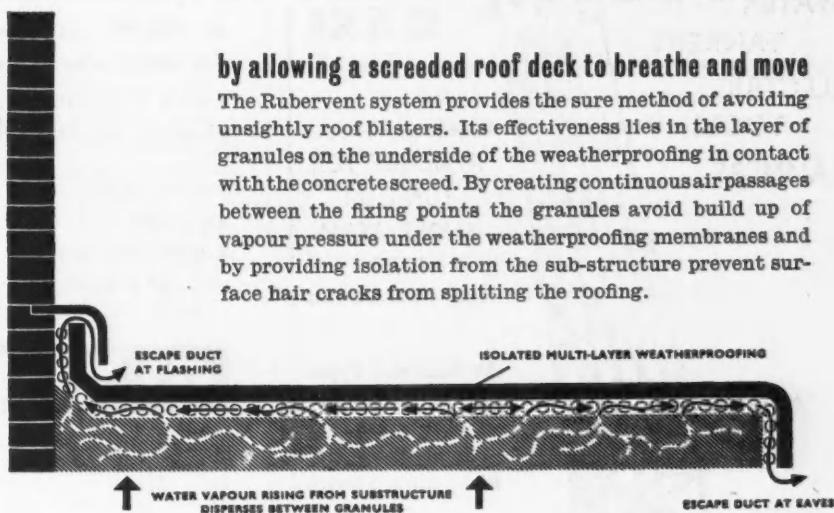


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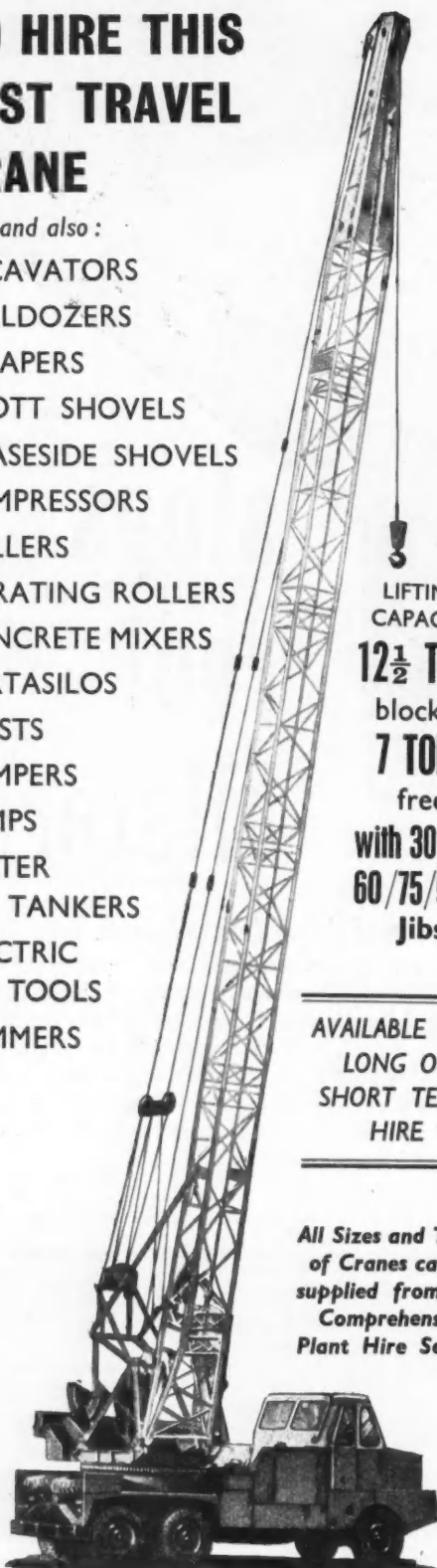
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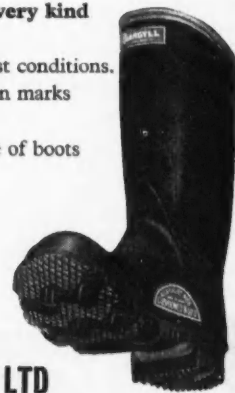
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THEALE, near Reading. (Tel.: Theale 358.)
Dorchester, Oxon. (Tel.: Clifton Hampden 236.)
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BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)
BULL BROS., S. AND L., LTD., 126A High Street, Winchester. (Tel.: 2264.) Concrete aggregates (reconstituted, pit-mixed, weighbatched to meet any specification); also ballast, hoggins, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Sway and Totton.
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
GILSON, S. C. AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)
HALL AND CO., LTD., Baltic Wharf, Marine Parade Southampton (Tel.: Southampton 21234), and at Portsmouth. Pits at Ringwood, Highbridge and Totton. Gravel aggregate, concreting, plastering and building sand.
HASKINS, G. AND SONS, LTD., Queen Street, Emsworth. For washed sands and graded aggregates, path and road gravels, hoggins, clinker, ashes. (Tel.: Emsworth 2271.)
MOREYS (VERWOOD), LTD., Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggins, path gravel.
NEW MILTON SAND AND BALLAST CO., Lymington Road, New Milton, Hants. (Tel.: 37 and 565.) Guaranteed crushed, washed, screened and graded concrete aggregates. All sizes. Washed sharp and fine media.
PETERSFIELD ENGINEERING AND CONCRETE PRODUCTS, Ltd., Buriton, nr. Petersfield, Hants. (Tel.: Petersfield 1079.) Concrete aggregates, washed and graded filter media.
PRIVETT, W. G. AND SONS, LTD., Drayton Lane, Portsmouth. (Tel.: Cosham 70059.) Concrete aggregates, building sand, hoggins, ashes, washed and graded filter media.
RALPH OF BASINGSTOKE, LTD., 37 Kempshott Lane, Basingstoke, Hants. (Tel.: 85.) Concrete aggregates, building sand, path gravel, hoggins, concrete aggregates, hoggins, building sand, etc.
WESSEX SAND AND GRAVEL CO., LTD., 126 Hillside Avenue, Southampton. (Tel.: 56616.) Pits at Romsey and Ringwood, Oak. Concrete aggregates, hoggins, building sand, etc.
WRAYSBURO SAND AND GRAVEL CO., LTD., Station Road, Theale, Reading, Berks. (Tel.: Theale 373.)

HEREFORDSHIRE

BENGRIY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 5014.) Suppliers of all grades of crushed concrete aggregates, road metalling, pitching stone, hardcore and coated macadam.
CLEE HILL TRANSPORT AND ROLLING CO., LTD., Ludlow, Salop. (Cleehillstone 284.) (See Shrops.)
NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) All grades of tared and bituminous macadam, roadstone, chippings and concrete aggregates, etc.
OLD RADNOR TRADING CO., LTD., Kingston. (Tel.: 1.) Granite and limestone aggregates, coated macadam, concrete products.
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel.: Salop 3541/2.)
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel.: 3158/9.) (See Gloucestershire.)

HERTFORDSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
EASTWOODS SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Broadbourn pit. (Tel.: Hoddesdon 2456.) Producers and distributors of all grades of washed aggregates.
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.
HALL AND CO., LTD., Railway Yard, Orchard Road, Stevenage (Tel.: 775), and at Hatfield. Gravel aggregates, concreting, plastering and building sand.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives. (See Huntingdonshire for details.)
WEBB, G. CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel.: 59966, 53969, 50353 (night).) (See Cambs.)
WINFIELD, HENRY, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Pits at Hemel Hempstead, Watford, West Hyde, Rickmansworth. Concrete aggregates, hoggins, building sand.

HUNTINGDONSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)
FERRERS AND AGGREGATES, LTD., Northampton Road Quarries, Rushden (2354/5). (See Northants.)
GRAVEL PRODUCTS (HUNTS), LTD., St. Neots, Hunts. (Tel.: St. Neots 125.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds., Hunts, and South Cambs.
NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough (Tel.: 554/5), and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 384/5). Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.

HUNTINGDONSHIRE

WEBB, G. CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel.: 59966, 53969, 50353 (night).) (See Cambs.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

KENT

BRASTED SAND PITS, Brasted, Kent. (Tel.: 586.) London office: 10A Ellery Street, S.E.15. (Tel.: New Cross 3337.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.H. bricks, ashes, etc.
BROWN BROS. (SITTINGBOURNE), LTD., Chalkwell Road, Sittingbourne, Kent. (Tel.: Sittingbourne 330.) Sand, ballast, shingle, hardcore, clinker, breeze blocks, etc.
CLUBB, J. LTD., Dartford, Kent. (Tel.: Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, concreting and building sand.
DIAMOND TREAD CO. (1938), LTD., Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarry owners, tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel.: City 7001—10 lines.)
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HARRIS, M. P. AND CO., LTD., Station Road, Paddock Wood, Kent (Tel.: 385.) (See Sussex.)
TILBURY CONTRACTING AND DREDGING CO., LTD., Postley, Maidstone. (Tel.: Maidstone 55401/2/3.) Suppliers of tared, bituminous and dry Kentish ragstone, sea walling, asphalt fillers, Scotch granite and kerbing.

LANCASHIRE

BROOMBYS, LTD., Sandside, Milnthorpe (Tel.: 3251/2), Westmorland. (See Westmorland.)
BUCKTON QUARRIES, Ltd., Brimston, all grades. (Tel.: Mossley 123.) Or write Main Road, Oldham.
CASTLETON SAND AND GRAVEL QUARRIES, LTD., Trows Lane, Castleton, nr. Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup. (Tel.: Bacup 287.) Washed pit sand, crushed washed stone aggregates; pitching stone.
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DUNNING AND SON, LTD. (See Shropshire.)
HARTLEY, JOHN W., LTD., Lundsfield Quarry, Carnforth. (Tel.: Carnforth 100.) Large producers of highest quality washed sands, clean washed natural pebble and crushed gravel aggregates for all construction purposes.
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HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 232.) (See Staffs.)
MANCHESTER OFFICE: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)
PENMAENMAWR AND WELSH GRANITE CO., LTD., all sizes and gradings of crushed granite aggregate. Immediate delivery ex stock.
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Office: Cornbrook Road, Manchester, 15. (Tel.: Trafford Park 3830.)
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TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughborough, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Te-washed sharp concrete sand. Plastering sand. Plant capacity: 2,000 tons per day.
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WITHERS LIMESTONE, LTD., Black Lane Quarry, Carnforth. (Tel.: Carnforth 327.) Graded limestone aggregate to B.S.S., all sizes. Immediate delivery ex stock.
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LEICESTERSHIRE

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DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)
ENDERBY AND STONEY STANTON GRANITE CO., LTD., 21 Nene Works, Leicester. (Tel.: 56682.) Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel.: Amb. 1141.)
GRAVEL HILL SAND QUARRIES, LTD., Prior Park, Ashby-de-la-Zouch. (Tel.: Ashby 79.) Works: Hartshorne, Derbys. Yellow screened plastering and building sand, all to B.S.S.
HILTON GRAVEL, LTD., Hemington Fields, near Shardlow, Derby. (Tel.: Shardlow 266.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 317—15 lines.) (For details, see Nottinghamshire.)

LEICESTERSHIRE

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WREAKE VALLEY GRANITE CO., LTD., Melton Mowbray. (Tel.: Pits—Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand.

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CONINGSBY SUPPLY CO., LTD., Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel.: Woodhall Spa 3150.) Screened limestone, hardcore, pitching, filling, flint, hoggins. Ex quarries or delivered.
DOW-MAC (PRODUCTS), LTD., Tallingston, Stamford. All grades of sand and gravel. (Tel.: Market Deeping 2301.)
EAST MIDLANDS BUILDERS' SUPPLY CO., LTD., 21 Castle-dyke West, Barton-on-Humber, Lincs. (Tel.: Barton 2189.) All grades washed sand and gravel, roadstone, hardcore, washed silica sand.
HARTSHOLME GRAVEL AND SAND CO., LTD., Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel.: Lincoln 23391.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)
HURDIS, J. W., LTD., Victoria Street, Grimsby (Tel.: Grimsby 3657) and Caistor (Tel.: Caistor, Lincs., 281). Building, plastering, concreting sand, also gravel, ballast, hoggins and roadmaking materials.
PETERBOROUGH QUARRIES, LTD., Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355A-3 lines.) Quarry at Ropsley, all grades of hardcore and broken stone. (See also Northants.)
POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. Pits at Tallington, near Stamford. (Tel.: Tallington 2140.) All grades washed sand and aggregates. For "Supercrete" ready mixed concrete, "phone Market Deeping 3132.
TRENTFORD GRAVELS, LTD., Deansgrove, Grimsby. (Tel.: Grimsby 5354.) Washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.

LONDON

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COX, H. AND SONS, LTD., 33 Southampton Way, Croydon, Surrey. (Tel.: 515.) (Tel.: Rodney 225—3 lines.)
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DORSET LIMESTONES, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) (For details, see Dorset.)
DRINKWATER, W. W. (WILLESDEN), LTD., Dudden Hill Lane, Willesden, N.W.12. (Tel.: GLADSTONE 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.) Also Staines Road, Hounslow Heath, Middlesex. (Tel.: Hounslow 622/5.)
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.
HALL AND CO., LTD., Chantry House, Eccleston Street, S.W.1 (Tel.: Sloane 7122), and at East Dulwich, Poplar and Wandsworth. Gravel aggregates, concreting, plastering and building sand.
KEEN, W. J. AND SONS, LTD., 16 Granville Road, Epping, Essex. (Tel.: Epping 2520.) All sands, ballast, shingle and hardcore supplied.
LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.
READ, P. T., LTD., Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Fairlop Airfield, Forest Road, Ilford, Essex. (Tel.: Hainault 611/2/3.)
ROADS RECONSTRUCTION (1934), LTD., Stockley Lane, West Drayton, Middlesex. (Tel.: West Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

MERIONETHSHIRE

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel.: 961), Salop.

MIDDLESEX

CROSS, GEO. C. AND CO., LTD., Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Concrete aggregates, hardcore, excavations, demolitions.
DRINKWATER, W. W. (WILLESDEN), LTD., Staines Rd., Hounslow Htn., Middx. (Hounslow 6222/3.)
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.
GRUNDON, S., 79 Harrington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.
HALL AND CO., LTD., Chantry House, Eccleston Street, S.W.1 (Tel.: Sloane 7122), and at Ashford and Brentford. Pit at Bedford, near Feltham. Gravel aggregates, concreting, plastering and building sand.
LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.
READ, P. T., LTD., Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Edmonton Gravel Pit, Montagu Road, N.9. (Tel.: Shoreditch 9128/9.) and Fairlop Airfield, Forest Road, Ilford (Tel.: Hainault 6111/2/3.)
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STAFFORDSHIRE

CONTRACTORS' GUIDE TO AGGREGATES

STAFFORDSHIRE

DUNNING AND SON, LTD., Wood End Gravel Pits, Hednesford. (Tel.: Hednesford 302/325.) Washed sand and gravel. All to B.S.S. High-quality roadstone, concrete aggregates and coated macadam from our Haughmond Quarry, near Shrewsbury. (See Shropshire.)

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HILTON GRAVEL, LTD., Cheadle, Staffs. (Tel.: Tean 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent (Tel.: Burton 6061).

HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2225/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

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SHIRE OAK GRAVELS, LTD., Lichfield Road, Walsall Wood, Staffs. Washed crushed gravel and washed sand. (Tel.: Brownhills 3253.)

TERN HILL SAND AND GRAVEL CO., LTD., Alimington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, clinkers, ashes and hoggins.

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WINDMILL SAND AND GRAVEL QUARRIES, LTD., Cannock Road, Wolverhampton. (Tel.: 31108.) Concrete aggregates, plastering, building and asphalt sand. All to B.S.S.

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DARBY'S SAND AND GRAVEL CO., LTD., Pit at Chippenham, Cambs. (See Cambs.)

DICKERSON, M. (CONTRACTORS), LTD., Gloucester Street, Cambridge. (Tel.: Cambridge 56973/4.) (See Cambs.)

FRECKENHAM GRAVEL CO., LTD., Pit at Freckenham. (See Cambs.)

HALL AND CO., LTD., West End Road, Ipswich. (Tel.: Ipswich 5559/4.) Pits at Kesgrave and Homersfield, near Harleston. Gravel aggregates, concreting, plastering and building sand.

MACLAREN BROS. (KENNETT), LTD., Station Road, Kennett, Cambs. (Kendford 333/4.) (See Cambs.)

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) (See Norfolk.)

WEBB, G., CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel. 59966, 53969, 50353 (night)). (See Cambs.)

SURREY

COFF, HARRY A., LTD., Buckhurst Hill, Cheapside, Ascot, Berks. (Tel.: 1026/7.) (See Berkshire.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

EASTWOODS SALE, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Longside Sand and Ballast Pit, Thorpe, nr. Egham. (Tel.: Egham 3121.) Runfold Sand and Ballast Pit, Runfold, nr. Farnham, Surrey. (Tel.: Runfold 2020.) Producers and distributors of all grades of washed aggregates.

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., Victoria Wharf, Croydon. (Tel.: Croydon 4444.) Other main depots at Coulsdon, Epsom, Mitcham, Oxted, Purley, Redhill, Tadworth and Woking. Pits at Sand and Reigate. Gravel aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., Kingston Road, Leatherhead, Surrey. (Tel. 3497.) (See Sussex.)

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JANES AND CO., LTD., 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, ballast, and bulk excavation. (Tel.: Slough 20361/2/3.)

LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Portchester Terrace North, Paddington, W.2. **MARCO (AGGREGATES), LTD.**, Pit: Norlands Lane, Thorpe, near Egham. (Tel.: Chertsey 3401.) Producers and distributors of high-grade washed sand, shingle, ballast, etc.

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WELLS, A. L., AND SON, LTD., Builders' Merchants, Garlands Road, Leatherhead. (Tel. 3018/9.) Sand aggregates, hardcore, ashes, cement. Clinker block manufacturers.

WINTON, WM. R., LTD., Send, Woking. (Tel.: Ripley 2454/5.) All grades sand, shingle, ballast, hoggins and ashes. Clinker block manufacturers.

SUSSEX

AVAMN, F., Cavendish Avenue, Eastbourne. (Tel. 4969/70.) Washed and graded ballast, sand, bricks, breeze and concrete blocks, hardcore, clinker, tarmac, etc., supplied. (See Sussex.)

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., 16 Chapel Road, Worthing. (Tel.: Worthing 7840.) Other main depots at Bexhill, Bognor, "Frowborough, East Grinstead, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crambles, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portlaine. Gravel aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., West Station Goods Yard, Bexhill (Tel. 61); Cavendish Place, Eastbourne (Tel. 3800); Dominion Road, Worthing (Tel. 8822); Whitbread Lane, Northiam (Tel. 2211); Station Goods Yard, Haywards Heath (Tel. 1750); Crawley Road, Horsham (Tel. 3366); The Hornet, Chichester (Tel. 4181.) All grades aggregates, hardcore, clinker, ashes, etc.

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WARWICKSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output reliable deliveries.

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)

HALL AND CO., LTD., 188 Lichfield Road, Four Oaks, Sutton Coldfield. (Tel.: Four Oaks 356.) Gravel aggregates, concreting, plastering, building sand.

JUDKINS, LTD., Granite Quarries, Tuttle Hill, Nuneaton. (Tel.: Nuneaton 3411—10 lines.) All sizes washed granite aggregate, tarred and bituminous macadam. Slab mix a speciality.

SHIRE OAK GRAVELS, LTD. (See Staffordshire.)

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel. 4587/8/9.) (See Bedfordshire and Northamptonshire.)

WESTMORLAND

BROOMBYS, LTD., Sandside, Milnthorpe, Westmorland. (Tel.: Milnthorpe 3251/2.) All grades washed crushed gravel and limestone, granite chippings, pitching, tarmacadam, rockery stone, etc.

ESK MANUFACTURING CO., LTD., Carlisle. (Tel.: Carlisle 2-4941.) (For details, see Cumberland.)

WILTSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

BULL BROS. & AND S., LTD., 126A High Street, Winchester. (Tel. 2264.) (See Hampshire.)

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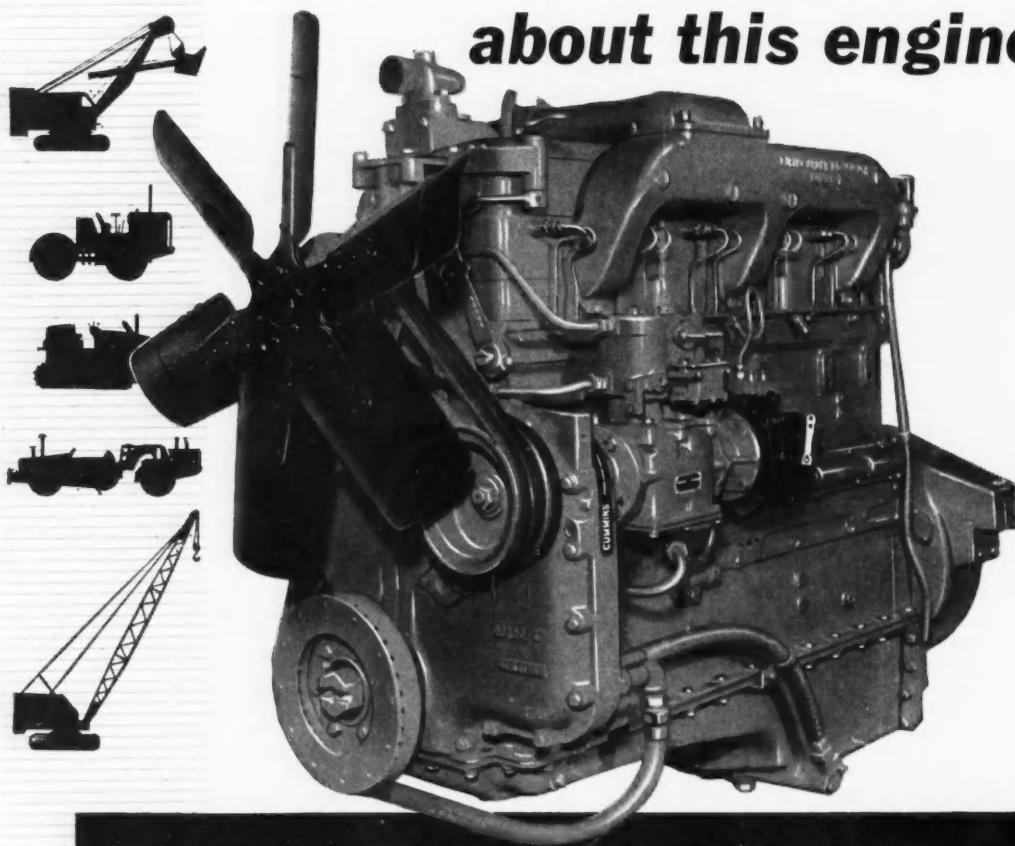
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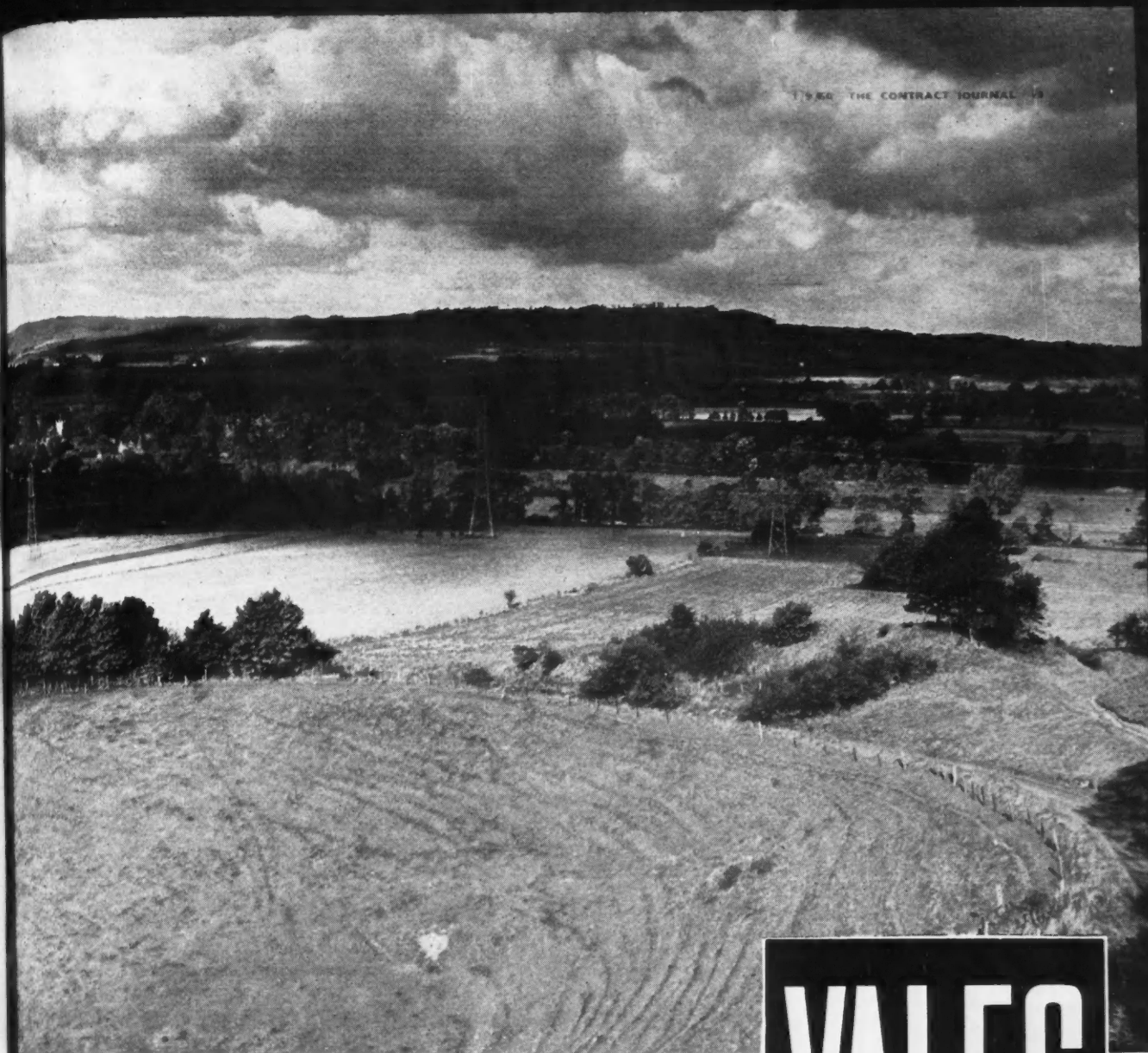
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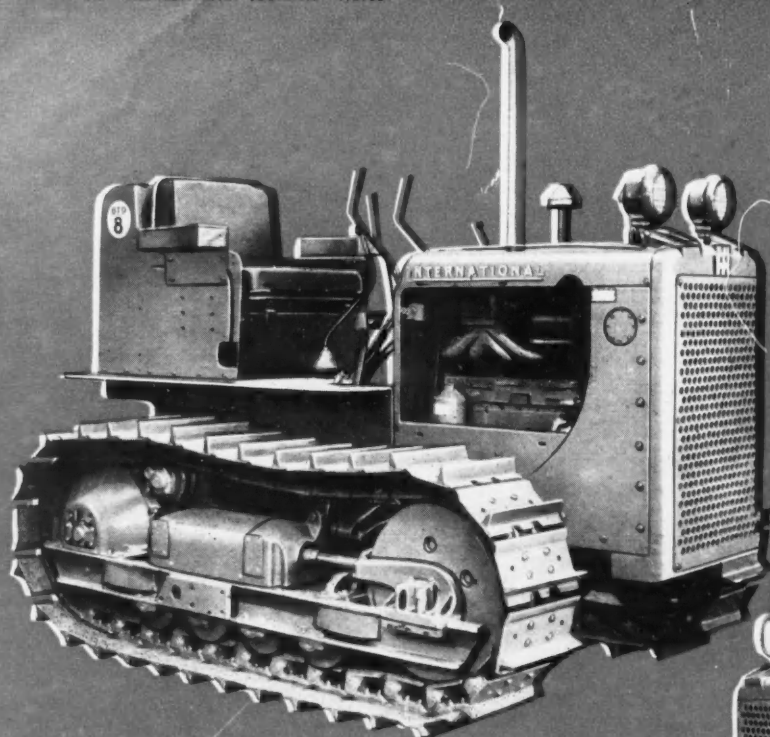
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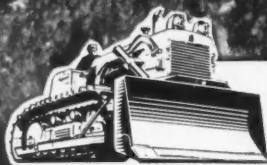
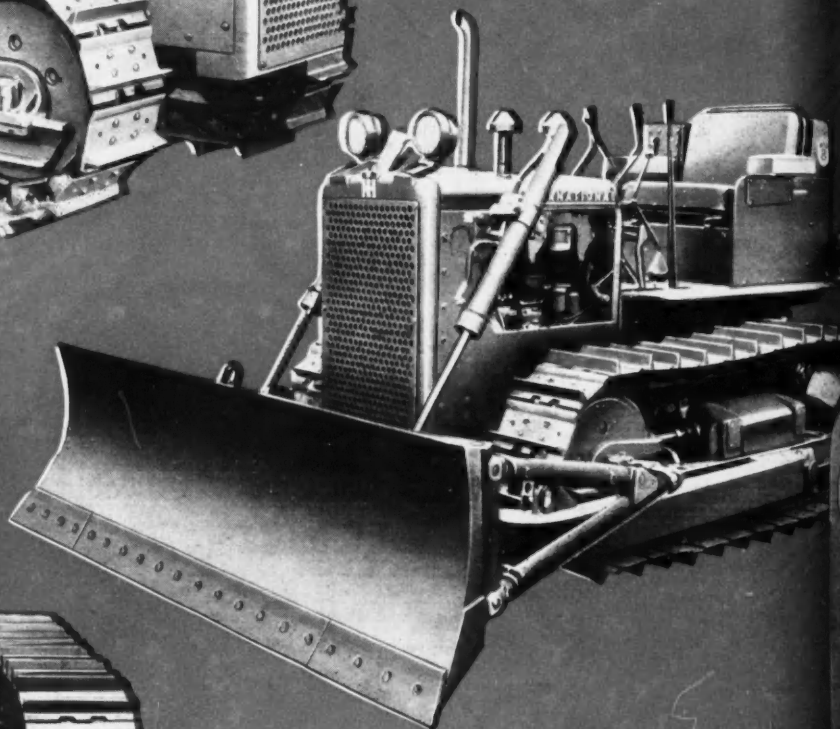
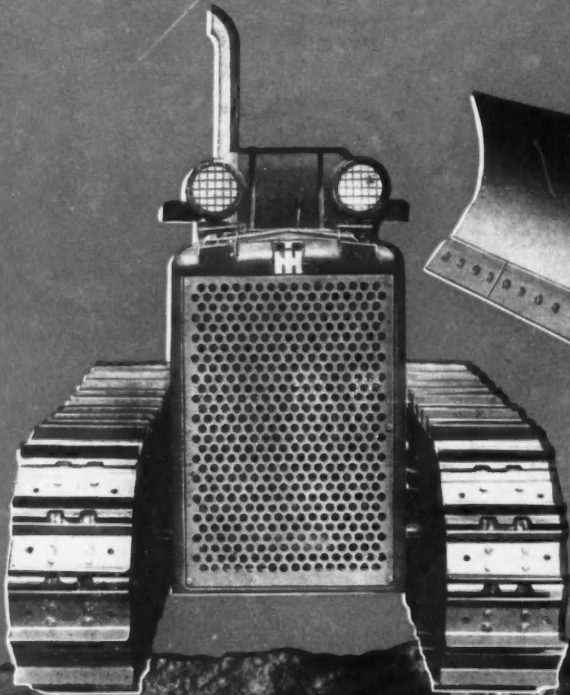
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